

The ARCHITECTURAL RECORD

Engineering
Library

FEB 10 1917
UNIV. OF MICH.
LIBRARY

February 1917

55¢ a Copy PUBLISHED IN NEW YORK



*Costs Less
Does More*

Liberty Bathed

—in a flood of electrical radiance, proclaiming freedom both night and day, typifies the “keep-a-going” spirit of American enterprise. This also is the dominant idea peculiar to

HOFFMAN

Instantaneous
WATER HEATERS

To Proclaim Freedom

—from annoyance in the maintenance of the hot water supply for all times, is to install the uncomplicated and efficient Hoffman equipment.

The non-extinguishable burner, the coil design and placement, the utilization of 84% of the heat units and the development of a heater having 50% less parts than the average, briefly outlines the Hoffman features responsible for trouble free, hot water service.

*You'll be interested in the prices.
Write for catalog.*

The HOFFMAN Heater Co.
LORAIN, OHIO





COVER—Water Color Sketch for House at Pelham Manor, N. Y. By W. H. Orchard	Page
THE NEW LANDSCAPE PLAN FOR WOOLLEY HALL, AT MAIDEN- HEAD, ENGLAND By Thomas H. Mawson	97
ENGLISH ARCHITECTURAL DECORATION. Part I. Text and Measured Drawings by Albert E. Bullock	105
THREE NEW BUILDINGS AT THE UNIVERSITY OF CHICAGO. Holabird & Roche and Shepley, Rutan & Coolidge, Architects By Peter B. Wight	127
PORTFOLIO OF CURRENT ARCHITECTURE	149
AN OASIS IN THE BRONX. By the late Montgomery Schuyler	177
AN ENGLISH STUDY OF THE PALAIS DE JUSTICE, BRUSSELS. By Max Judge. Drawing by W. Walcot	183
THE ARCHITECT'S LIBRARY: Books on Colonial Architecture. Part IV. The Minor Arts (continued) By Richard F. Bach	187
NOTES AND COMMENTS	190

Editor: MICHAEL A. MIKKELSEN.

Advertising Manager: AUSTIN L. BLACK

Contributing Editor: HERBERT CROLY

Yearly Subscription—United States \$3.00
—Foreign \$4.00—Single Copies 35 cents

Entered May 22, 1902, as Second
Class Matter, at New York, N. Y.

Copyright 1917 by The Architectural
Record Company—All Rights Reserved

PUBLISHED MONTHLY BY
THE ARCHITECTURAL RECORD COMPANY

115-119 WEST FORTIETH STREET, NEW YORK

F. T. MILLER, Pres.

W. D. HADSELL, Vice-Pres.

J. W. FRANK, Sec'y-Treas.

E. S. DODGE, Vice-Pres.



VIEW FROM PERGOLA, LOOKING SOUTH—
WOOLLEY HALL, MAIDENHEAD, ENGLAND.

THE ARCHITECTURAL RECORD

VOLUME XLI



NUMBER II

FEBRUARY, 1917

❖ *The New Landscape Plan for* *Woolley Hall, at Maidenhead, England* ❖

By Thomas H. Mawson

THERE seems to be quite a number of families just now who are able to make the best of two worlds, the Old and the New. What I mean is that men like Mr. Andrew Carnegie have their business associations in America and live a large part of their social life in Great Britain. Some, like Mr. Carnegie, in Scotland, domicile themselves in localities full of romance and the grandeur of nature; others, like Mr. Cottingham, in the peaceful sleeping valley of the Thames, and yet within a short run of London, with all its pulsating energy and life, where business can still be pursued in combination with the joys of horticulture and the pleasures of rural life. A large group, and an increasing one, take to the hunting field and other sports. In any case the families either erect a home for themselves, or, as more often occurs, acquire one of our ancient family houses

already replete with every suggestion of history, romance and evidence of modern refinement.

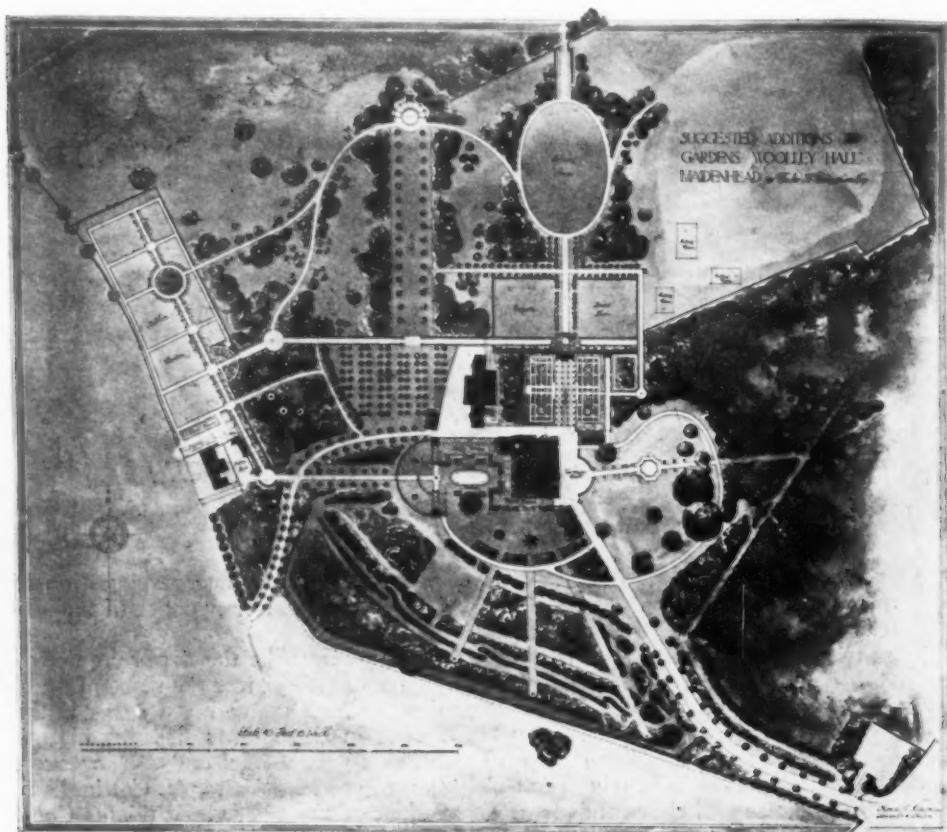
For myself I like the dreamy quiet of the Thames valley; it is the place of quiet anchorage for a man who, whether in the States or in England, is directing big enterprises to successful ends. Moreover, in the case of Mr. Walter H. Cottingham, president of the Sherwin-Williams Company, it was a matter of deep importance that the English home should be in the strongest contrast to the home in Cleveland, Ohio.

Woolley Hall is situated about two miles west of the quaint old town of Maidenhead, famous as a week-end's paradise; but the hall, which is far removed from the madding crowd, stands remote in its own grounds, which extend to about sixteen acres, with an additional three hundred and fifty acres of beautiful

forest and parklands studded with timber such as is to be found only in England. The hall is a modern building erected at great cost about sixty years ago, the style being transitional between late Georgian and early Victorian. The gardens were laid out at a later date in what is known as the English landscape manner, without much evidence of design, but exhibiting

into the estate, the residence has been enlarged and improved in many ways, so that it may now claim to be a good example of an English country house, fine and commodious in scale, convenient in plan and comely in its decorative treatment.

Such a house called for an architectural response in the garden, and for the merging of a certain amount of studied order

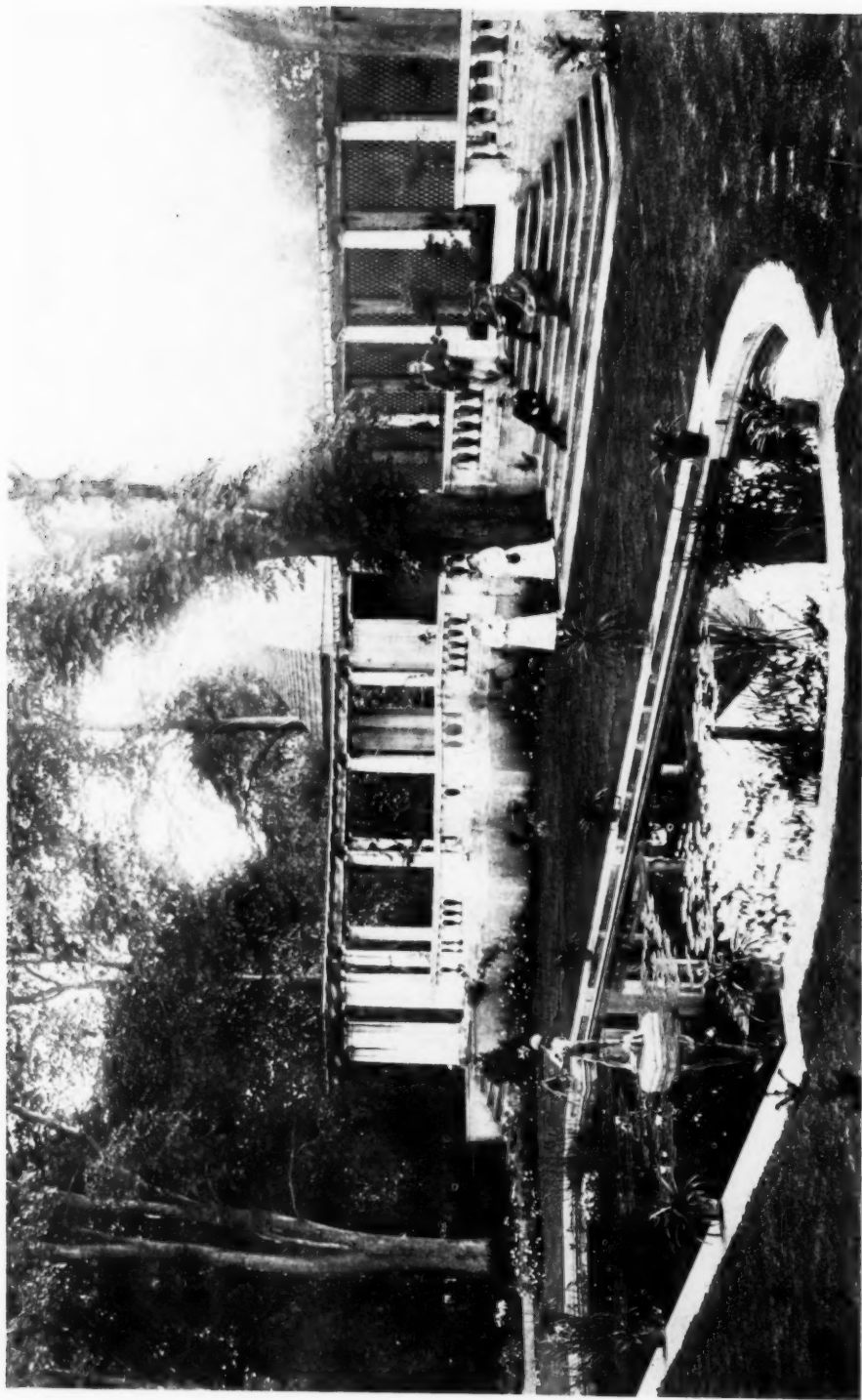


an intense love for conifers and trees of curious and rare habit. These have now grown so much that drastic thinnings have had to be carried out, along with a rearrangement in parts, which will ensure to Woolley Hall a continuity of forest-like effects. As will be seen by the photographs, however, it is the old timber trees which secure the dominant expression. The cedar of Lebanon, for instance, which stands near the lily pond, is one of the finest in the country.

Since the present proprietor entered

into the more haphazard layout. This has led to the preparation of a comprehensive scheme, laying down a policy for the development of the garden according to a co-ordinated treatment which would take advantage of every existing feature of interest, whether lawn or forest tree, and the introduction of other necessary features, without harshness or discord.

I always think that in England and in America the gradual development of landscape art has resulted in the power



101
POND GARDEN—WOOLLEY HALL,
MAIDENHEAD, ENGLAND.



PART OF UNFINISHED CARRIAGE COURT, SHOW-
ING WALL OF CLOISTER GARDEN; THE SMALL
ARCHES ARE FILLED WITH FRENCH TREILLAGE.



THE THREE ENTRANCES TO THE CLOISTER GARDEN, WITH
TEA HOUSE-WOOLLEY HALL, MAIDENHEAD, ENGLAND.

to co-ordinate many factors which are fixed and abiding with others which may seem foreign to them. The power to visualize them has been evolved by centuries of contact with art and nature. Our love of both has helped us to picture them in proper juxtaposition. I trust that this merit is in some degree exhibited in the plan and photographs.

My client was wise enough to see that whilst he had in Woolley Hall a fine house and a fine garden, he did not possess that unity which we always refer to as "house and garden." The problem which he set me was suitably to wed the two, so that they might become one. In all such cases the first question which has to be settled is this: Which shall be the dominant note, art or nature? As Bagehot put it, "which is to be conductor and which first fiddle?" They can never be equal in their appeal. In the town or suburban garden art should usually predominate, but in places like Woolley Hall nature should be foremost. It almost appears in the photographs as if the opposite was the case, but reference to the plan and a careful look at the trees in the illustrations will show that nature is easily "conductor."

Working from the residence, we start with severe formality, treating the immediate precincts as a series of what J. D. Sedding called "outdoor apartments." Thus we have the terrace and pond garden immediately in front of the entertaining rooms; a cloister garden, entered directly from the carriage court; then, in the following order, the tennis courts and bowling green and the ribbon-like "grass drives" or glades, which thrust their arms into the forest and woodland.

The view of the pond garden with pergola and temple is taken from the upper terrace and is practically the view which is obtained from the west window of the great parlor. Unfortunately all the views were taken within a month of the completion of the work and before the roof of the pergola could be clothed with greenery, but this added effect can easily be pictured by the initiated. Even the aquatics require another year to give them that aspect of luxuriance which is natural to them. In this picture is to be seen

the great beauty of the forest background. The second view is from the end of the pergola looking south and shows some of the beautiful conifers to which I have already referred.

The third view shows the three arched entrances to the cloister garden, with the tea house at the end (note the vista through the open doorway). The central footpath is laid down in grass, but the pergola paths are laid in brick. On either side of the cloisters there is a rose garden with beds cut in grass. Roses in flower can be seen between the brick piers of the pergola.

The fourth view shows a part of the still unfinished carriage court and the arched wall which encloses this side of the cloister and the panel rose garden. The small arches are filled in with French treillage. Here again is seen the splendid character of the native timber.

These four photographic views indicate the character of the work so far accomplished and which has occupied the labor of two successive winters. A third and smaller section is being undertaken this year. This consists of an oval lily pond near the tennis courts (shown as a bowling green on plan); the circular open-air garden theatre, which is also due east of the carriage courts; and the erection of a new entrance. There still remain the remodelling on economic lines of the kitchen garden and vineries, the planting of a new orchard and the layout of new landscape lawns intersected by a lake, and the planting and grouping of choice shrubs and trees. Plans have also been approved for the remodeling of workmen's cottages on the estate, and finally it is proposed to remodel the dairy farm and make it into a picturesque group of buildings. From this it will be gathered that there are still years of work before my client's ideal is fully reached. As no joys are so pure as those of a garden lover, I hope his ideals may continue to expand, for to the possibilities of fine gardening there is no end.

I ought to add that in designing this garden I have had the hearty co-operation of my son and partner, Mr. E. P. Mawson, who is already known to many of my professional brethren in the States.

English Architectural Decoration

Text and Measured Drawings
by Albert E. Bullock

Part I

DECORATIVE treatments are usually divided historically into certain periods, in order to indicate the typical ornament to be applied, together with the correct furniture and hangings with which to furnish an apartment. A successful finish should show a rhythmic harmony in its general appearance, with an absence of superfluous ornament. Each of the styles from Elizabeth and James I to Adam and later Victorian periods was governed by certain distinct principles of composition. The object of these articles is to give some typical examples in the several periods with appropriate details.

Paneling and plaster work are the chief features of the older styles, and their variations have formed the basis of later work. With the earlier periods the panels themselves were small and the walls were treated either to their full height or with deep modeled plaster friezes. Ceilings in the late Tudor times were of small molded ribs in various geometric formations, until the introduction of Italian craftsmanship, when papier maché plaques were used in conjunction with wooden moldings, the mitres being covered with large button-headed nails that secured the lead leaves which covered the mitres, as is instanced in the ceiling to Cardinal Wolsey's closet at Hampton Court Palace. Thereafter a gradual development followed, with broad flat ribs interlacing in patterns and having enriched bands and frequently pendants of considerable projection.

Early seventeenth century and late sixteenth century ornament had curious similarity in quite distinct parts of England and Scotland, indicating the existence of a guild or fraternity in the craft governing the main principles of the treatment. During the reign of Henry VIII Hans Holbein executed the ceiling to the Chapel Royal at St. James's Palace, in 1540, while in the time of Elizabeth the system

became somewhat set and lost much of the originality the Italian manner was intended to foster. There are many examples of this latter period, especially during the opening years of the seventeenth century.

Sizergh Castle, Westmorland; Canonbury, Towers; Sir Paul Pindar's House, Bishopsgate; the Palace of Bromley-by-Bow; Hatfield House; Knole, Kent, and many other examples may be cited in which treatments on exactly similar lines can be found as far north as Balcarres in Fifeshire. The above-mentioned examples range from 1575 to 1606. With the introduction of the work of Inigo Jones at Greenwich, Forde Abbey, Wilton and elsewhere there is a marked change in every detail. The ceiling ribs are made up on a more constructional theory, with large panels intended for the reception of paintings, while the walls exhibit much originality, with columns or pilasters for general division. Where these latter did not occur, the walls were very successfully subdivided by means of paneling and ornament in varied formation, often picked out in white and gold, or in oak, with at least one notable instance where a reception room contained a black ceiling with pale blue birds modeled thereon in staggered formation. Above the dado large spaces or panels were provided to contain pictures.

Throughout this period windows still retained a certain medieval touch of late Tudor origin in the mullioned and transomed frames containing casements filled with lozenge-shaped or rectangular glass. It was not until late in this century, or, to be exact, in 1670, at Ham House, that the first guillotine window or double hung sash was introduced into this country. The French folding casements were of later introduction, while the small cottage mullioned window with casement frames was a survival of Tudor times.

Metal hinges and fittings form an in-

interesting branch in all the periods, from the pierced wrought iron work of Elizabethan days to the chased brass and lacquered rim locks of the days of Sir Christopher Wren. At Hampton Court Palace and Belton House, near Grantham, there are some fine examples of chased brass work, while the French and Flemish smiths turned out some interesting designs of a very varied nature during the days when chain armor was the fashion and the sword was considered mightier than the pen.

Indeed, we have not to go back many centuries to discover evidence of the smith's skill in the mailed armor worn by the knights and cavaliers, while there exists in many monuments of Jacobean period elaborate representations of this class of work carved in marble.

In times when tapestries of "silk and silver" were the vogue the kings of Europe vied with each other in their production, making royal presents from their own weaving factories. Thus the tapestry works of James I at Mortlake, under the management of Sir Francis Crane, produced many beautiful hangings which were sent to France, where the Gobelines wove the marvelous works preserved at the Royal Palaces of England. At Hardwick Hall there are some fine tapestries in the Presence Chamber of heroic subjects treated in mammothlike proportions. Most of the larger mansions of England contain excellent examples of foreign weaving, as Forde Abbey, Dorset; Chatsworth, Belton, etc.

By the middle of the century a further change set in, by which carved ornament was judicially confined to certain salient areas, as the chimney pieces and door heads. Ceilings became more floral in character, and picture frames were often specially carved for a complete setting.

In the latter half of the century wood carving arrived at its culminating point of perfection under the impetus given by the chisel of Grinling Gibbons. This remarkable carver was the chief artisan employed by Sir Christopher Wren in his ecclesiastical work. The protégé of Evelyn, Gibbons evolved an entirely original method of depicting still life in all its varied beauty as embellishment to many

state rooms in English mansions. His cult was followed by Watson and others at Chatsworth, the residence of the Duke of Devonshire; and it would, indeed, be hard to discern the difference in skill by comparing the carvings at Holme Lacy or Belton with those at Chatsworth, were it not definitely recorded that Samuel Watson had spent forty years carving at that mansion in the Peak. The only works of Gibbons at Chatsworth would appear to be a framed example of game, grouped with a lace cravat carved in pear wood, which adorns one of the walls of an anteroom, and the pendants in the Chapel between the cedar panels.

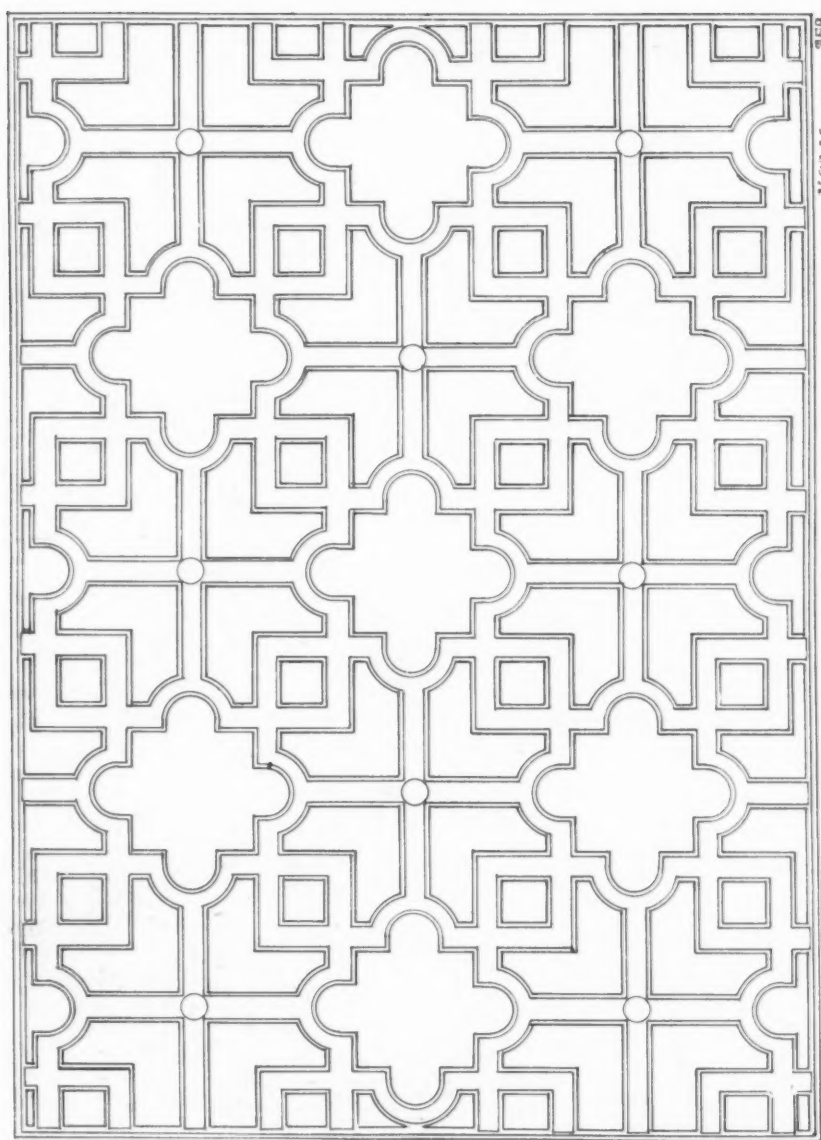
With the close of the century it became general to panel and carve in pine wood in lieu of oak, cedar and pear wood, the rooms being painted in various colors. The character of the main cornice is frequently a clear indication of change in style. In Jacobean times variety was often obtained by means of a dentil course; otherwise the cornice was void of ornamentation or enrichment.

In the early years of the seventeenth century cornices were frequently of plaster, with bold modillions and enrichments, the color scheme being white and gold. The William and Mary cornice, like that of Charles II's time, had a carved ogee molding below the fascia ornamented with a variation of the acanthus leaf pattern. During the days of Wren and Gibbs the examples are of the purer Palladian principles, while the Adam brothers favored the egg-and-tongue extensively and a great variety of other lighter treatments emanating from their researches at Spalato and many French motifs. For a short period subsequently a pure French vogue held sway, in which painted decorations combined with green and gold color schemes became general.

Throughout all the periods, among the ornament and enriched moldings, certain favored forms suffered changes which of themselves often indicate the period of the work. Chief among these forms may be mentioned the husk ornament, which was largely used as a conventional beading to window architraves and cornices to overdoors and the main horizontal cornice, finding most favor in the

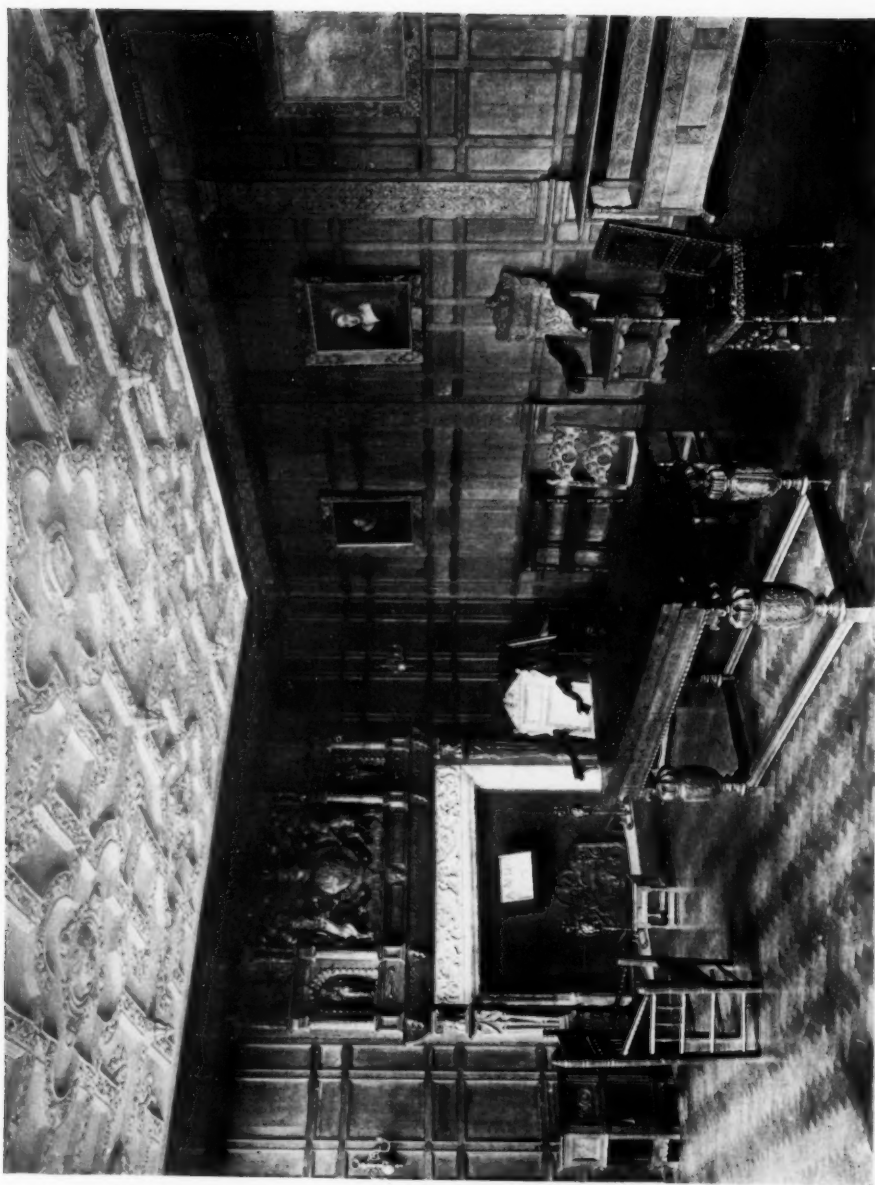


BAMFYLDE HOUSE,
EXETER, 1590.

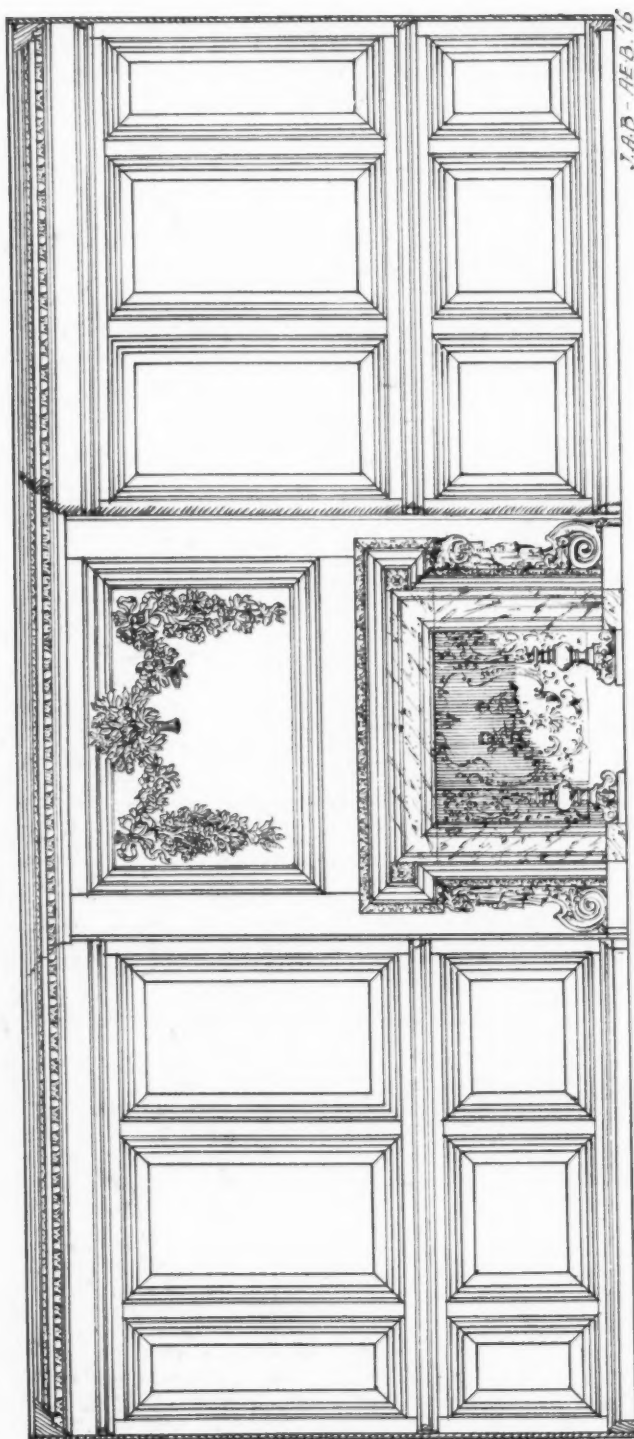


V&A.M. c 1606. 78B
 KEY PLAN OF CEILING FROM
 PALACE OF BROMLEY BY BOW.

SCALE 0 2 4 6 8 10 FEET.



JACOBEOAN ROOM FROM PALACE OF
BROMLEY-BY-BOW, LONDON, ABOUT 1606.

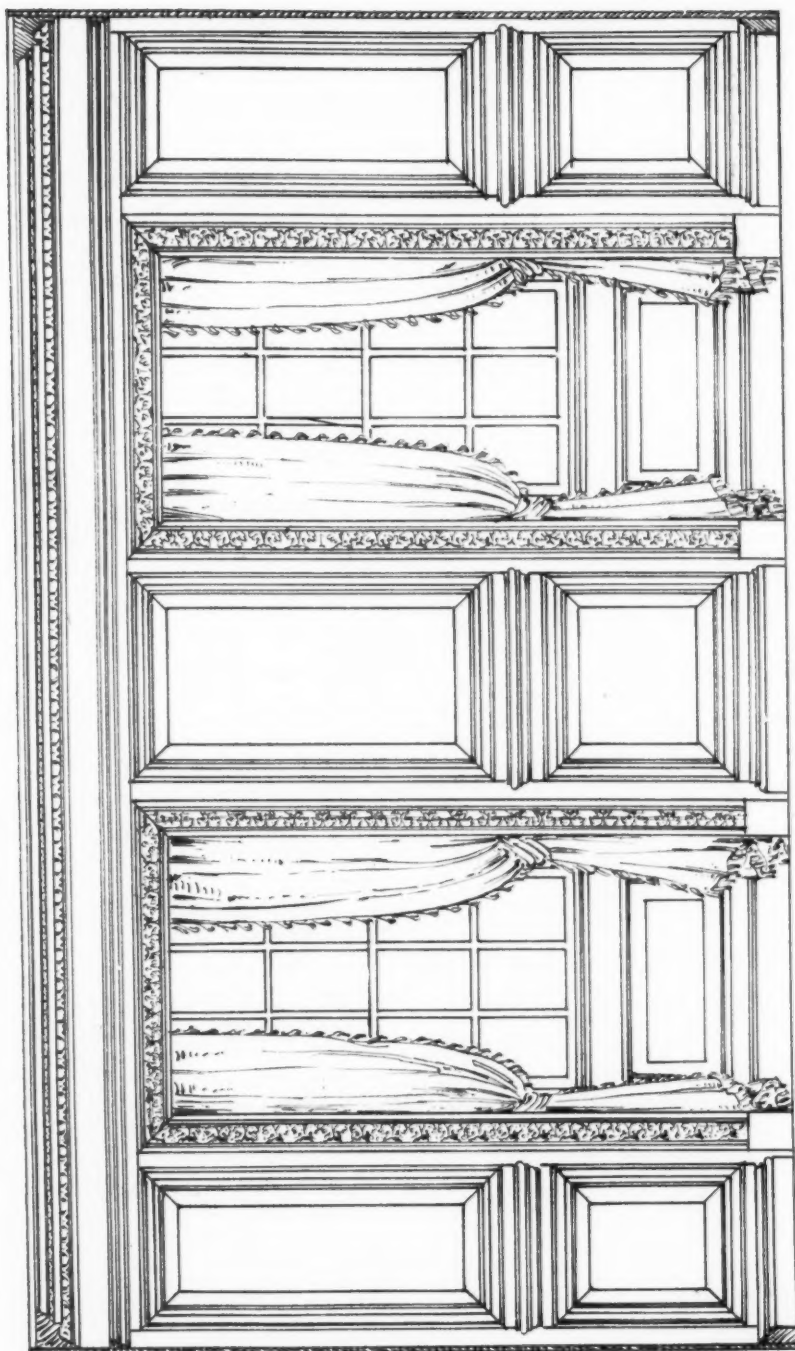


Scale 1 2 3 4 5 6 7 FEET.

OAK ROOM FROM AUCKLAND HALL, NORTHUMBER-
LAND. WILLIAM AND MARY PERIOD, ABOUT 1680-90.

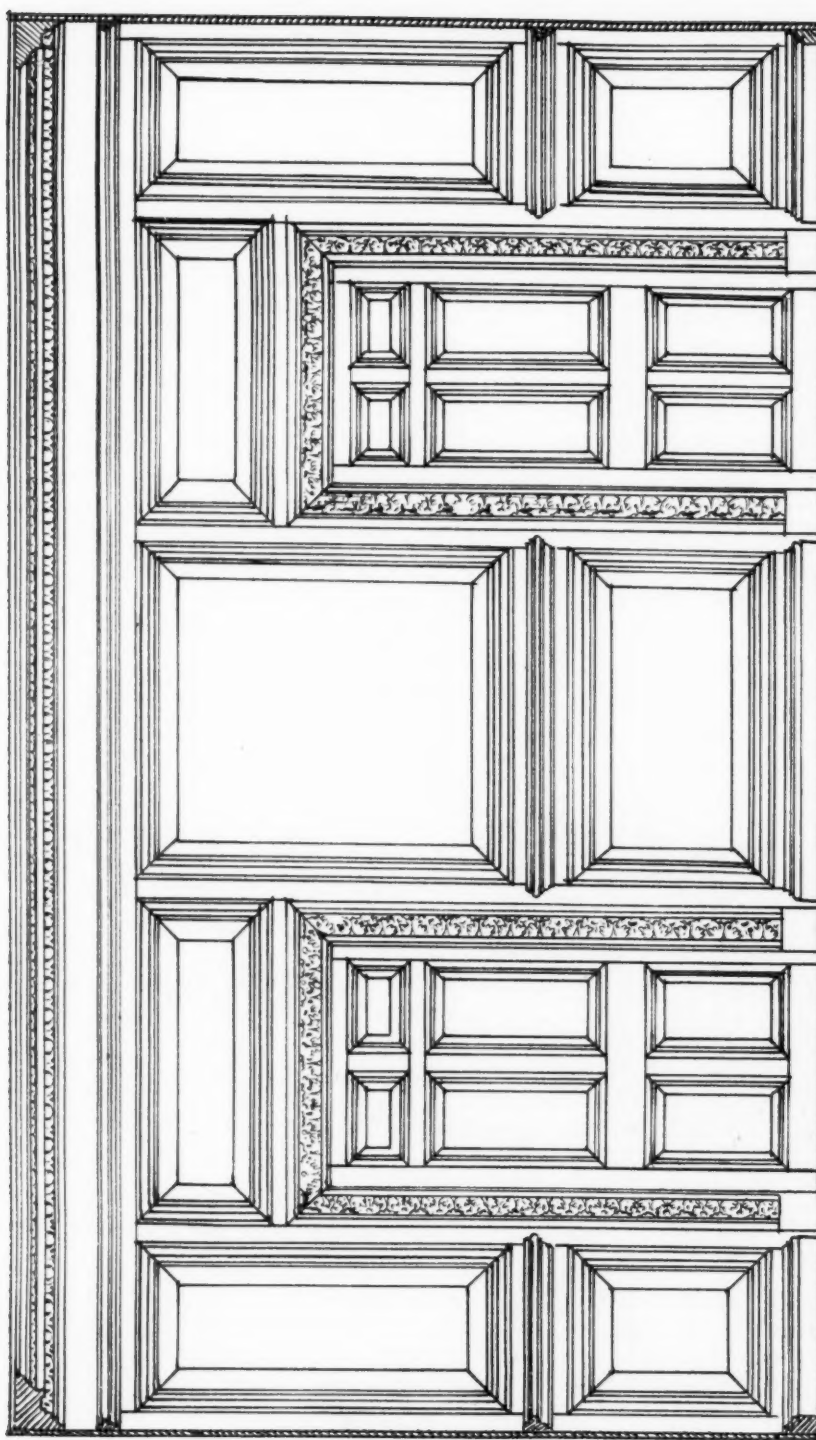


OAK ROOM FROM ACKLAND
HALL, NORTHUMBERLAND.



SCALE 1" = 7 FEET

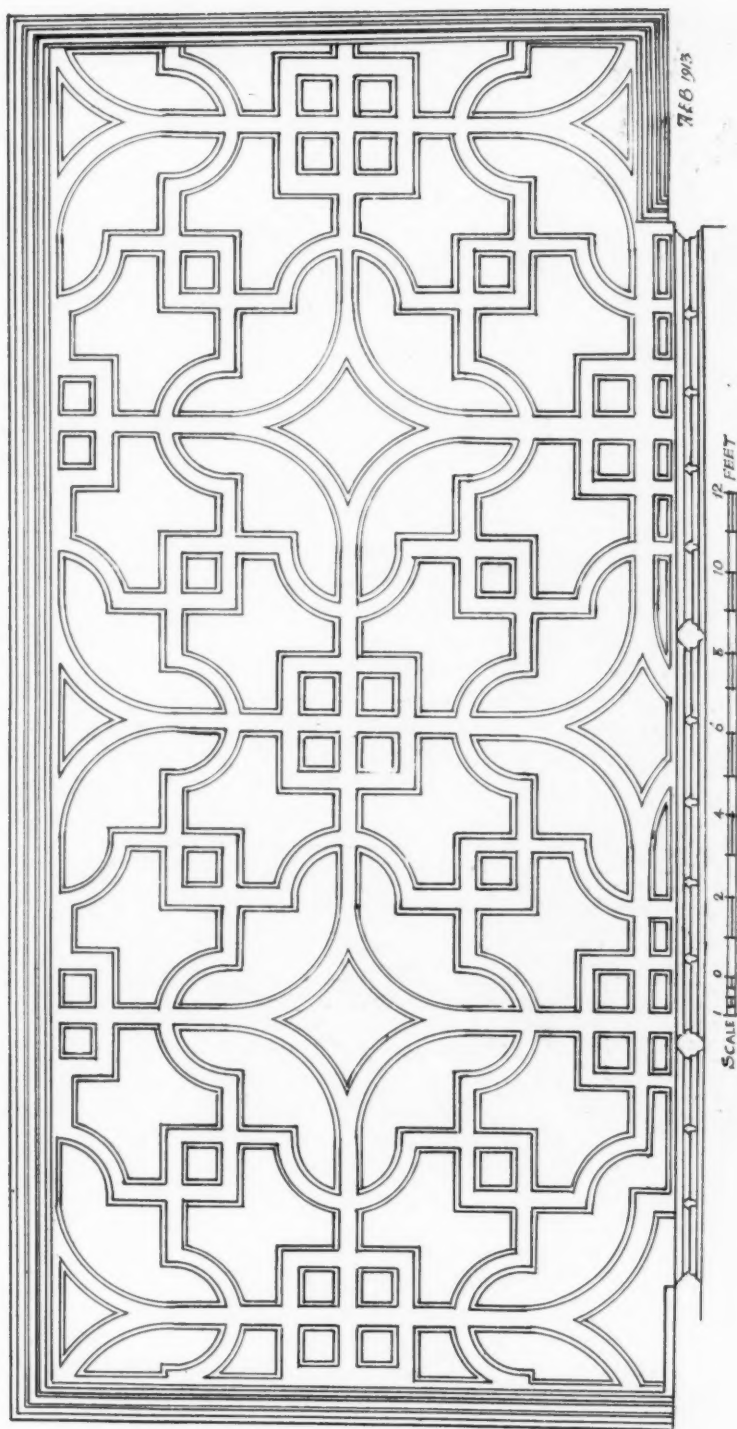
SIDE OF OAK ROOM, ACK-
LAND HALL, NORTHUMBERLAND.



SIDE OF OAK ROOM, ACK-
LAND HALL, NORTHUMBERLAND.



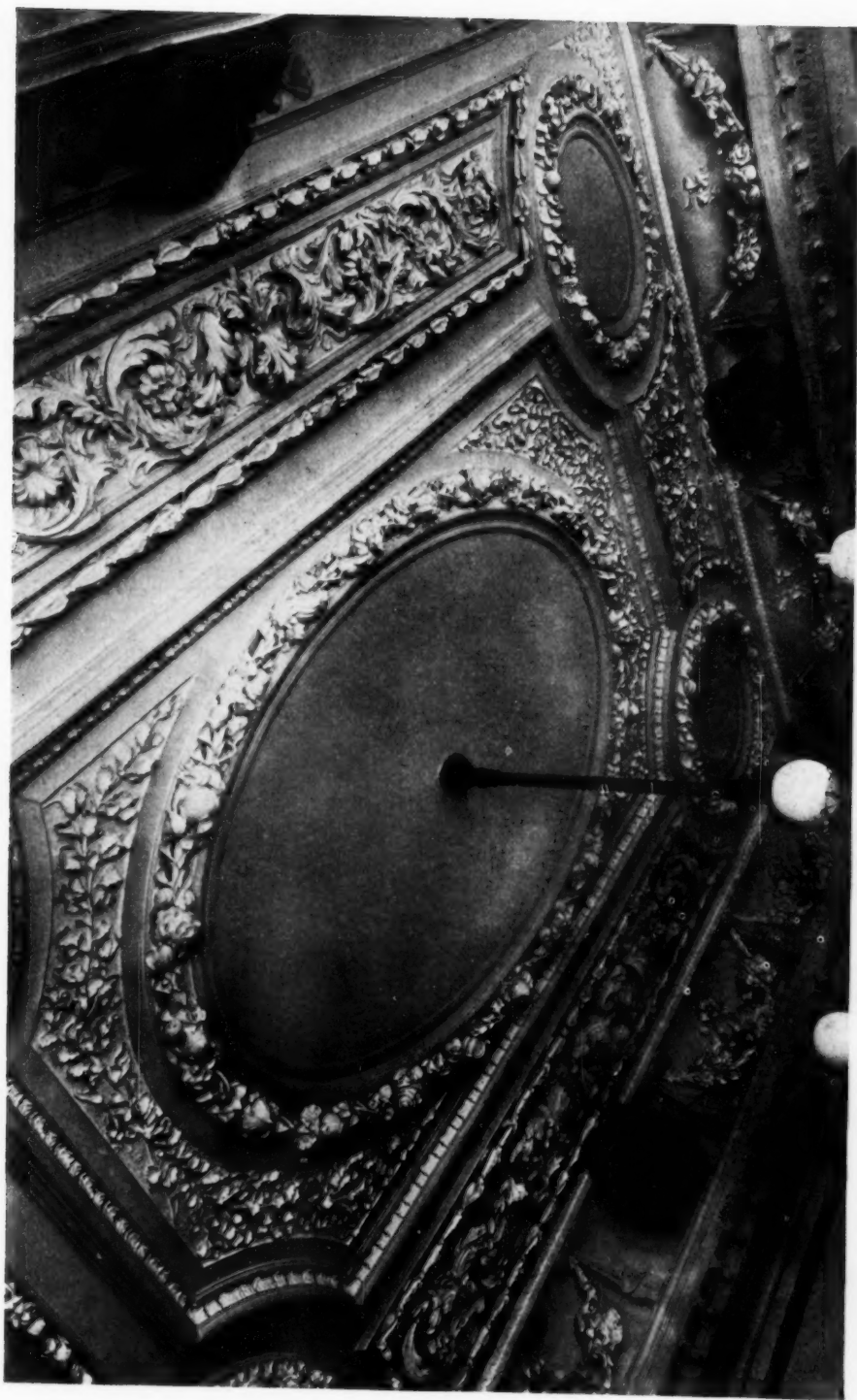
WILLIAM AND MARY [CHARLES II (?)] ROOM,
REMOVED FROM WALES TO HITCHEN.



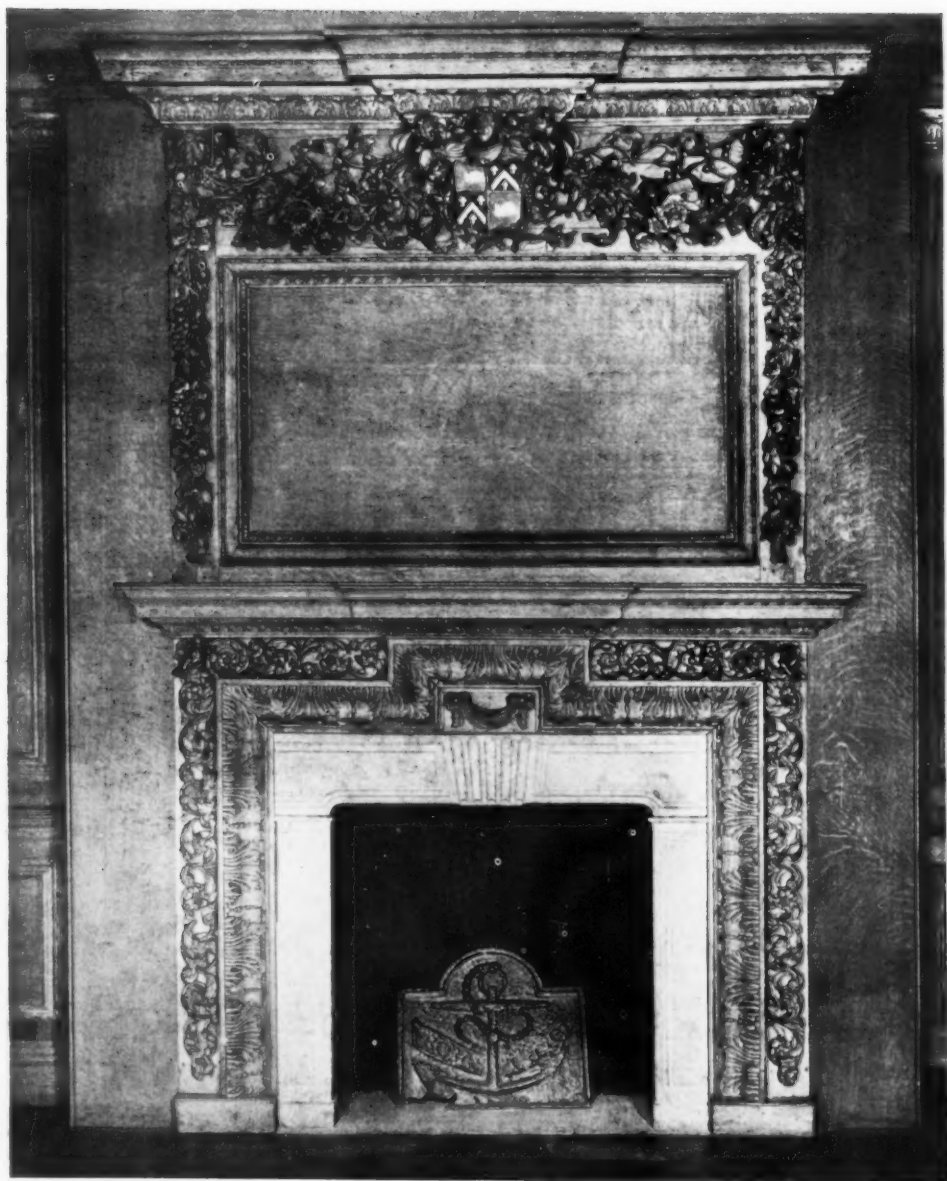
KEY PLAN OF MESSRS. PEARSE'S
JACOBEOAN CEILING, EXETER.



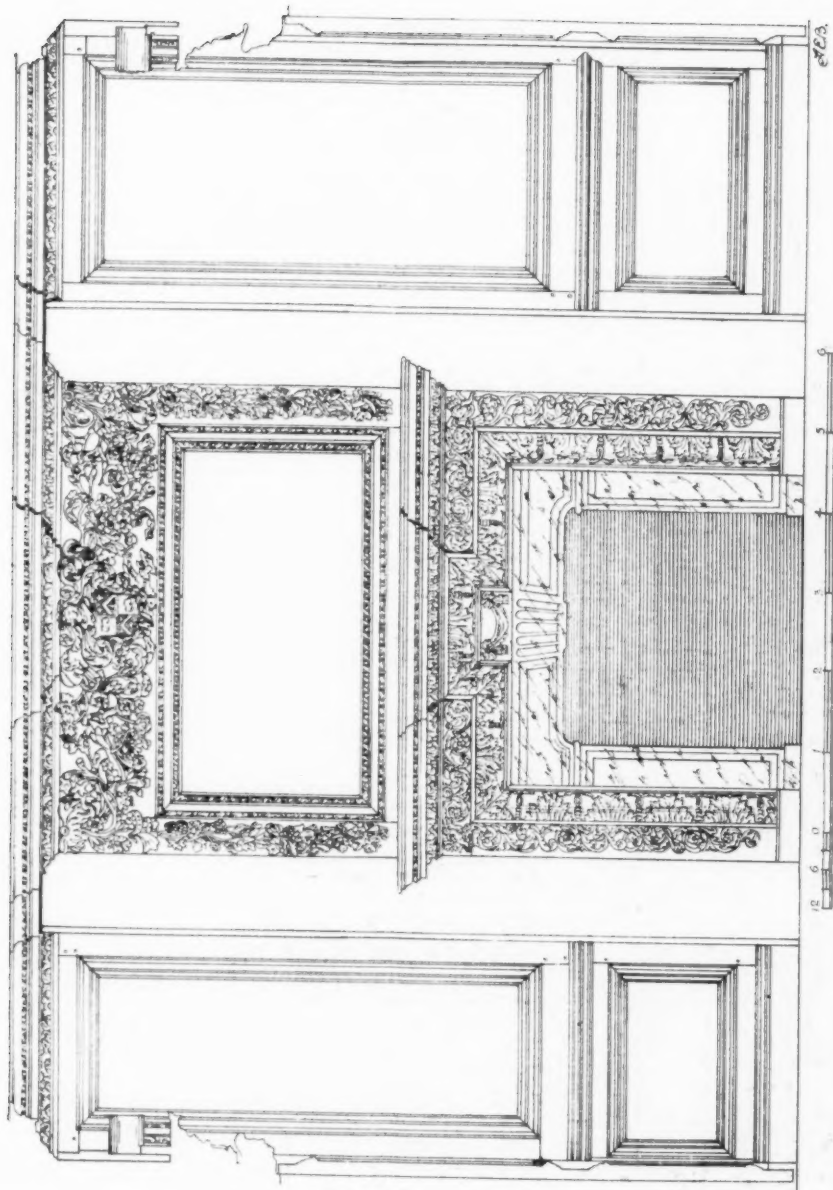
STAIRCASE, CHARLES II PERIOD, FROM LORD
IDDESLEIGH'S MANSION, "THE PYNES," DEVON.



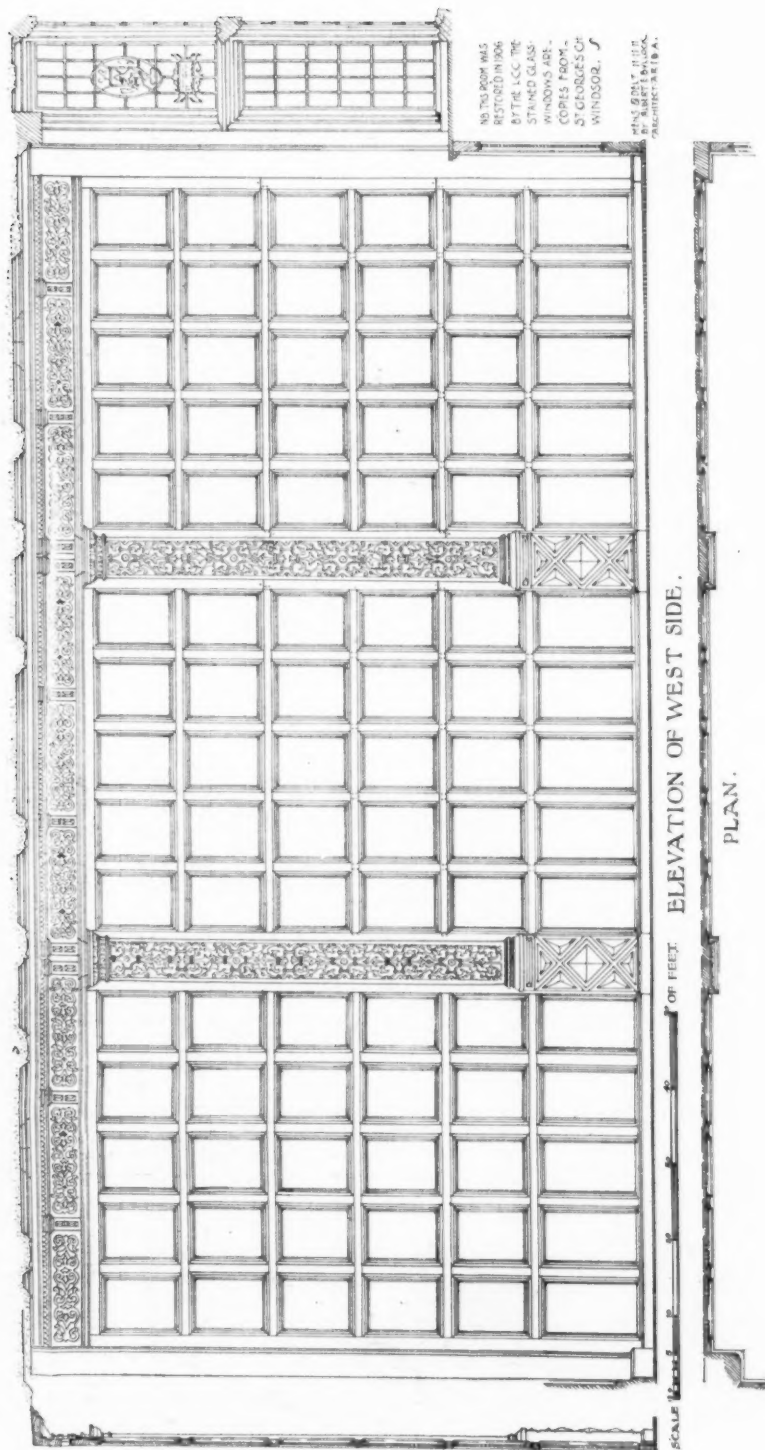
CHARLES II CEILING FROM MESSRS.
GREEN'S PREMISES, EXETER.



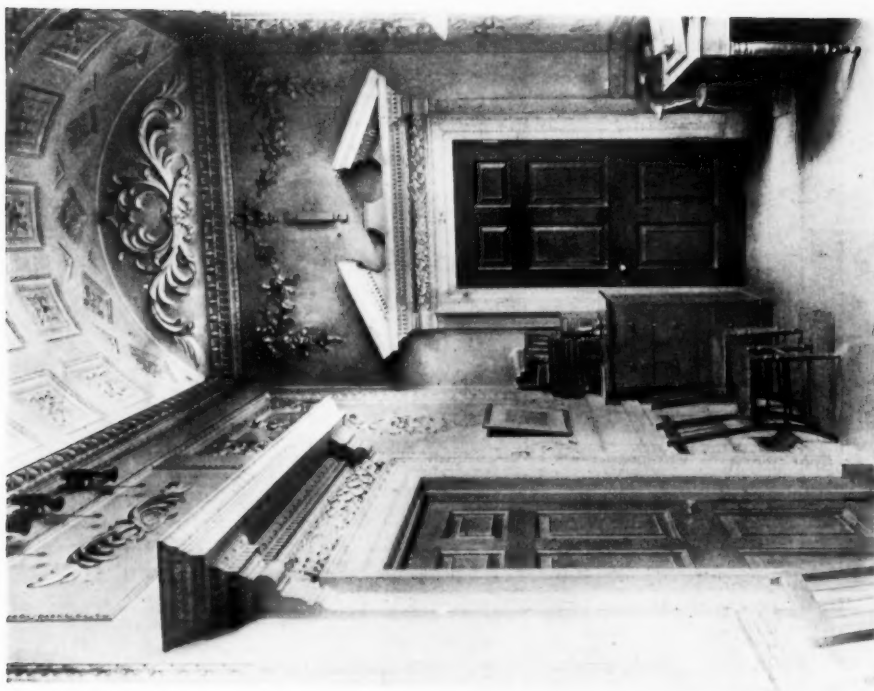
CHIMNEYPIECE, CLIFFORD'S INN,
FLEET STREET, E. C., ABOUT 1686.



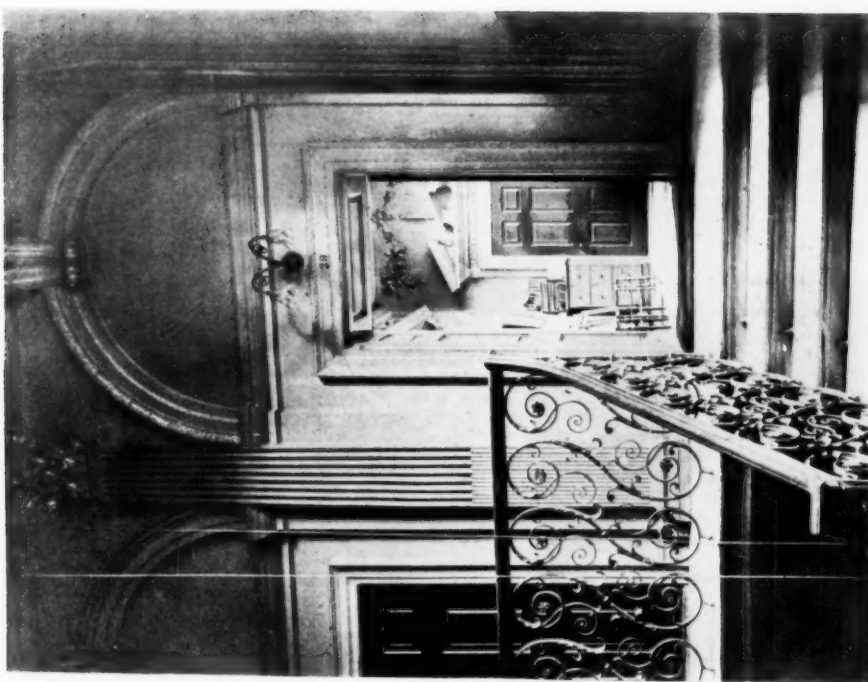
CHIMNEYPIECE, CLIFFORD'S
INN, FLEET STREET, E. C.



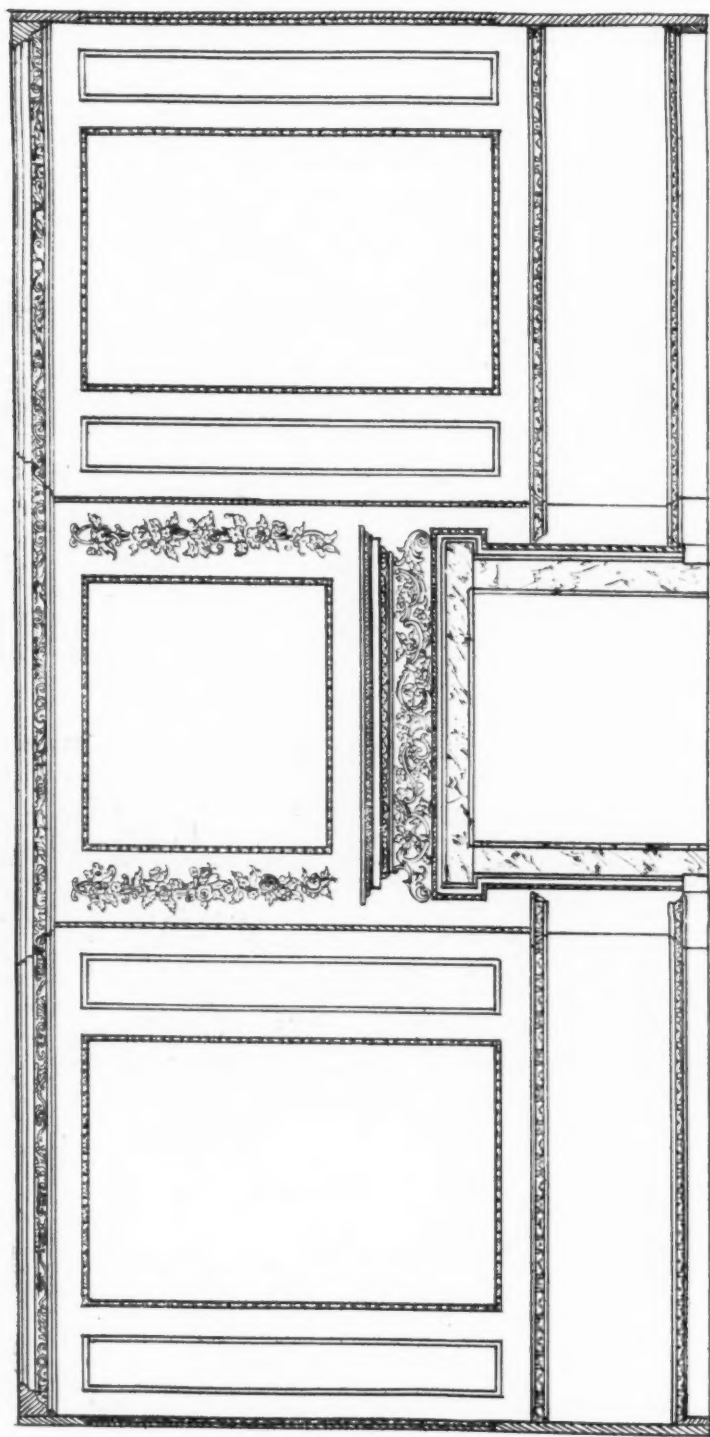
PANELING FROM NO. 17
FLEET STREET, E. C.



Antechamber.
PEMBROKE HOUSE, WHITEHALL GARDENS, 1762. SIR WILLIAM CHAMBERS, ARCHITECT.



Staircase to First Floor.



SCALE 0 1 2 3 4 5 6 7 8 9 FEET.

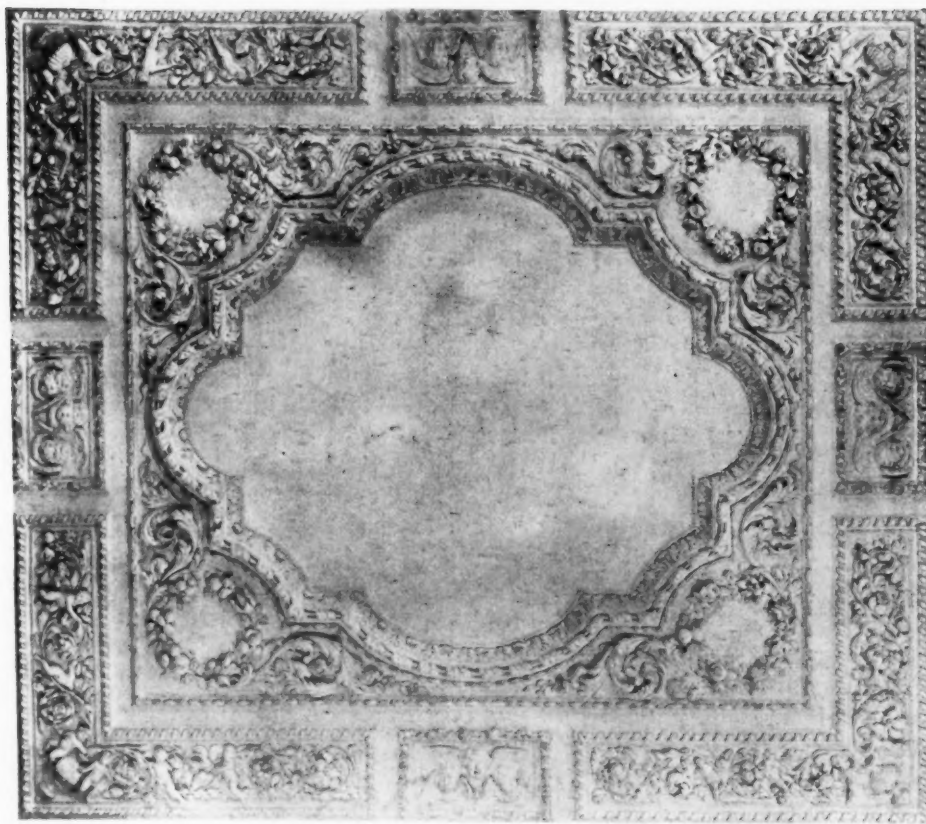
MID-GEORGIAN ROOM,
ABOUT 1740.



SALOON CHIMNEYPiece,
BELTON HOUSE.



DINING ROOM, BELTON HOUSE. WORK OF SIR
CHRISTOPHER WREN AND GRINLING GIBBONS.



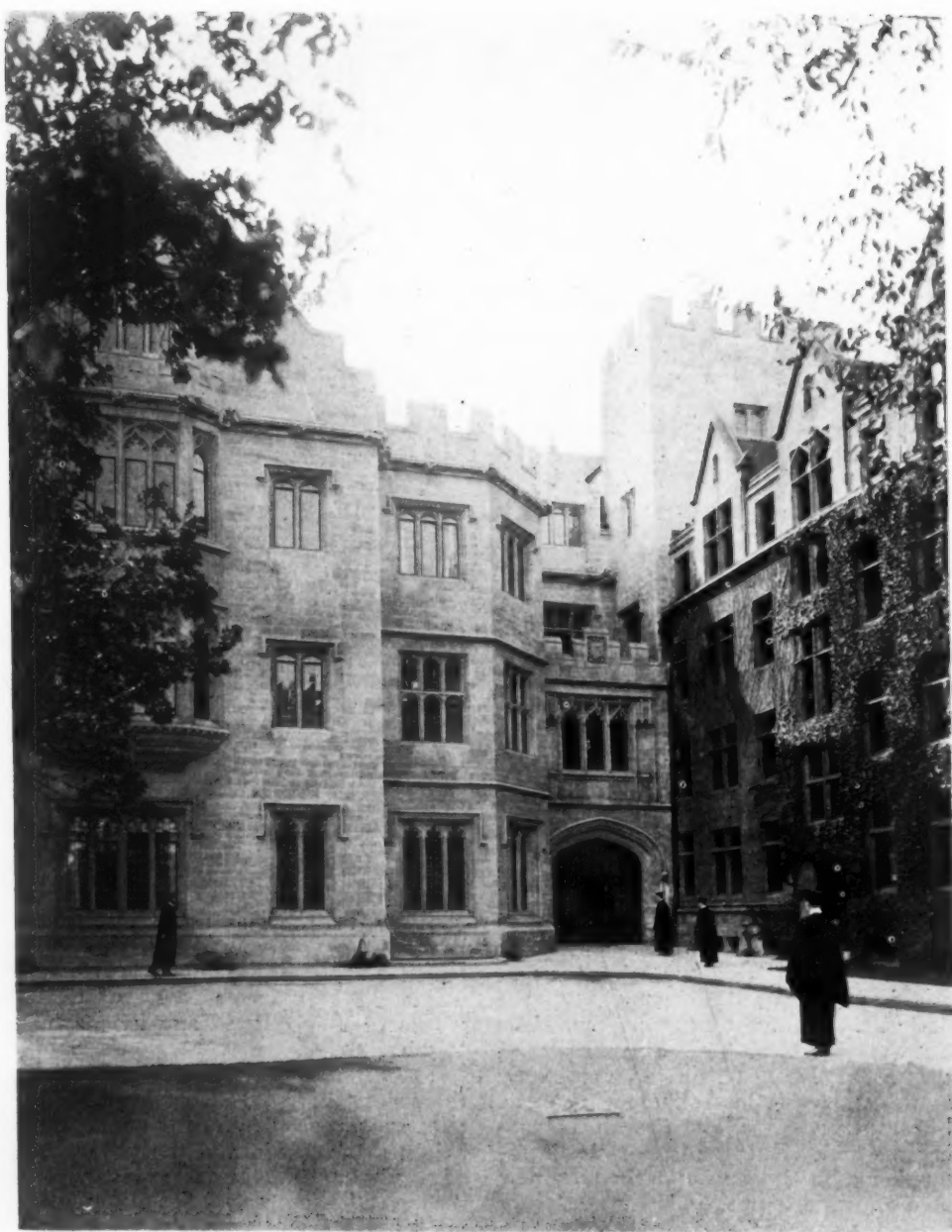
CHAPEL CEILING, BELTON HOUSE.

Georgian periods and in some of the work of the time of Charles II. The acanthus leaf was treated in a great variety of ways and of different sizes, while the egg-and-tongue figures in nearly all the periods from Inigo Jones to Adam. The Greek fret is to be noticed in mirrors of the time of George II, and more especially in the work of Sir William Chambers. Subsequently Greek and French features became keen rivals, and upon the introduction of mahogany and ebony a new note of grandeur was added to the larger mansions, as Holkam Hall and other works under the auspices of William Kent, the understudy of Sir Richard Boyle, the Earl of Burlington.

Kent was a Court painter and architect

of considerable ability and in his day was considered a great authority on all matters relating to art and dress, being consulted largely by the nobility. He was, incidentally, an earnest student of the works of Inigo Jones and his nephew, Webb.

The division of walls differed little in the several periods, except in minor details, such as the depth of the friezes, the height of the dado and the proportions of panels. These things, however, form the essential characteristics differentiating between the respective styles and giving just those qualities which go to make up successful compositions, about which we hope to have something more to say in a later article.



ENTRANCE FROM GRADUATES' COURT, DIVINITY DORMITORY ON THE RIGHT—CLASSICS BUILDING, UNIVERSITY OF CHICAGO.

Three New Buildings at the University of Chicago

*Holabird & Roche and
Shepley, Rutan & Coolidge*
Architects

By Peter B. Wight

BEFORE any buildings for the new University of Chicago had been erected the committee on buildings and grounds appointed Henry Ives Cobb as architect to the university. His first duty was to lay out a tentative general plan for the location of such buildings as it would be thought necessary to erect, having in view those that might first be needed. The committee then, after discussion with Mr. Cobb, decided that the style of architecture for the buildings should be Late English Gothic. This was some time in 1891. On November 26 of that year, work was commenced on the first building. Since then there have been erected on the grounds north of the Midway Plaisance forty-two buildings, at an expense of \$6,700,000, within twenty-five years. In 1891 the grounds comprised about seventeen acres. They now comprise about one hundred acres, located on both sides of the Midway Plaisance, from Cottage Grove avenue, on the west, to Dorchester avenue, on the east, a distance of three-quarters of a mile. The university assets now exceed \$35,000,000, with \$4,000,000 of the founder's final gift yet to be paid—a total of \$39,000,000. The Midway Plaisance, one of the great features of the Columbian Exposition of 1893, comprises the entire block between Fifty-ninth and Sixtieth streets, and is three-quarters of a mile long. While it belongs to the city of Chicago and is under the control of the Commissioners of the South Parks, it is practically part of the landscape effects of the university. In accordance with the general scheme of Lorado Taft for decorating it with sculpture, the trustees of the Ferguson Fund have commissioned

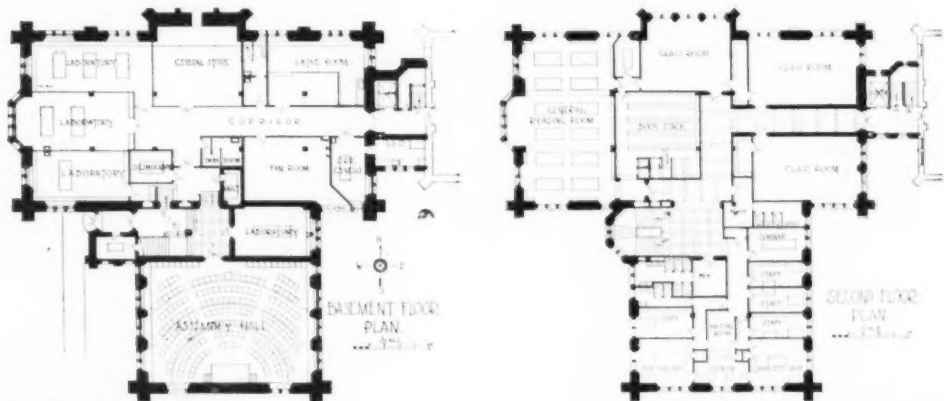
Mr. Taft to model, full size in plaster, his group of colossal figures called the "Procession in the Fountain of Time," and the allegorical and more than colossal figure of "Father Time," which, when carved in marble, will stand in the waterway in the center of the Midway Plaisance. This is being done at his studio on the south side of the Midway Plaisance, and is more than half completed.

It may be interesting, as a matter of history, to state briefly how the university came to be what it is. There had been a University of Chicago, with an Astronomical Observatory, located on a piece of ground on the west side of Cottage Grove avenue between Thirty-second and Thirty-fourth streets, running back to what is now Rhodes avenue, which was practically founded in 1855 by Stephen A. Douglas, who presented the land. This university, with its buildings, including the Astronomical Observatory, existed until 1886, when it was overcome by financial disaster, and the buildings have been long since removed. A bronze tablet to the memory of Stephen A. Douglas, and bearing his likeness, designed by Lorado Taft, has been placed in the cloister leading to Leon Mandel Hall, which is one of the most prominent of the present university buildings.

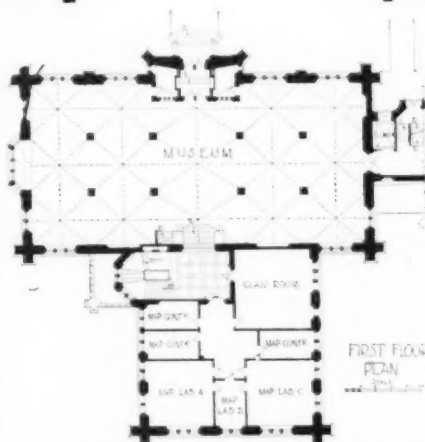
The new university corporation is the result of efforts of T. W. Goodspeed and others to establish a collegiate foundation in Chicago a few years after the failure of the old university. About the same time John D. Rockefeller was interesting himself in the possible foundation of a college in New York or Chicago. The American Baptist Education Society, of which F. T. Gates, of Chicago, was sec-

retary, was also studying the problem of a new collegiate institution. In December, 1888, the Education Society approved an effort to establish a well-equipped institution in Chicago. At an annual meeting of the Education Society in 1889 it formally resolved to take immediate steps towards the foundation of a college

president. Dr. Harper served as president until his death, on January 10, 1906. His first effort was to make the institution a university in fact, with all the necessary departments pertaining thereto, to put it on a par with all others in this country. And this he did in concert with his lifelong friend, John D. Rockefeller.



in the city of Chicago. To make this possible Mr. Rockefeller at once subscribed \$600,000 toward an endowment fund, on condition that \$400,000 be pledged before June 1, 1890. Mr. Goodspeed and Mr. Gates at once undertook the raising of the fund. This was accomplished, and in addition there was secured, as a gift from Marshall Field, of Chicago, a block and a half of ground, valued at \$125,000, as a site for the new institution. Two and a half additional blocks were afterward purchased. At the annual meeting of the society in May, 1890, held in Chicago, the board of the society adopted articles of incorporation and a charter for the new institution. It was incorporated September 10, 1890, as the University of Chicago, and at the first meeting of the new board Professor William Rainey Harper, of Yale University, was elected



ROSENWALD HALL, UNIVERSITY OF CHICAGO.

In September, 1890, Mr. Rockefeller made his second gift, of \$1,000,000. The condition of this gift was that the Baptist Union Theological Seminary at Morgan Park, near Chicago, should become the Divinity School of the university; and of the amount contributed by Mr. Rockefeller, the sum of \$100,000 was to be devoted to the erection of buildings for the Divinity

School. Thus it became affiliated with the Baptist denomination, as had been also the old university which went out of existence in 1886. But its management has always been liberal and has imposed no denominational tests upon those attending the university.

The later history of the university is now generally known and need not be detailed here. Mr. Rockefeller continued to make his gifts from year to year, until they now amount to about \$35,000,000,

most of which has been for endowment and running expenses. It is no wonder, therefore, that the trustees should in due time have conferred upon him the title of Founder. A very small part of his contributions has been invested in buildings. By the shrewd way in which his many gifts have been made he has not only secured for the university other gifts of money, but has taken care that it should not fall behind in its expenses. He has encouraged an *esprit de corps* in the wealthy people of Chicago, who, since the erection of the Divinity School, have contributed nearly all the money that has gone into buildings. These nearly all bear the names of the donors. The presentation of buildings has been encouraged by the knowledge that, owing to the great permanent endowment of the university, buildings erected by private munificence will be properly maintained. Hence, the principal events in the history of the university for the past twenty years have been the erection of a constant succession of new buildings.

After Mr. Cobb had prepared a general plan of what then comprised the university campus, he made plans for the first building, which was on the line of Ellis avenue, then the western boundary of the property. This building was Cobb Lecture Hall, the gift of Silas B. Cobb, who was in no way related to the architect. Commenced November 26, 1891, it was occupied September 1, 1892. It is now the general office and business headquarters of the university, a handsome gray stone building fronting on the campus and forming part of a long row of attached buildings erected soon afterwards. The exterior is of smooth-dressed buff Bedford stone, which now, like that of all the other buildings, after two years' exposure to the weather, has a light gray color. The committee on buildings and grounds not only decided that all buildings should be in the Late English Gothic style, but that their exteriors should be of this stone. This material has been rigidly adhered to up to the present time, though there has been some variety in the method of dressing it. But it would be hardly right to say that Mr. Cobb had adhered to the Late English Gothic style.

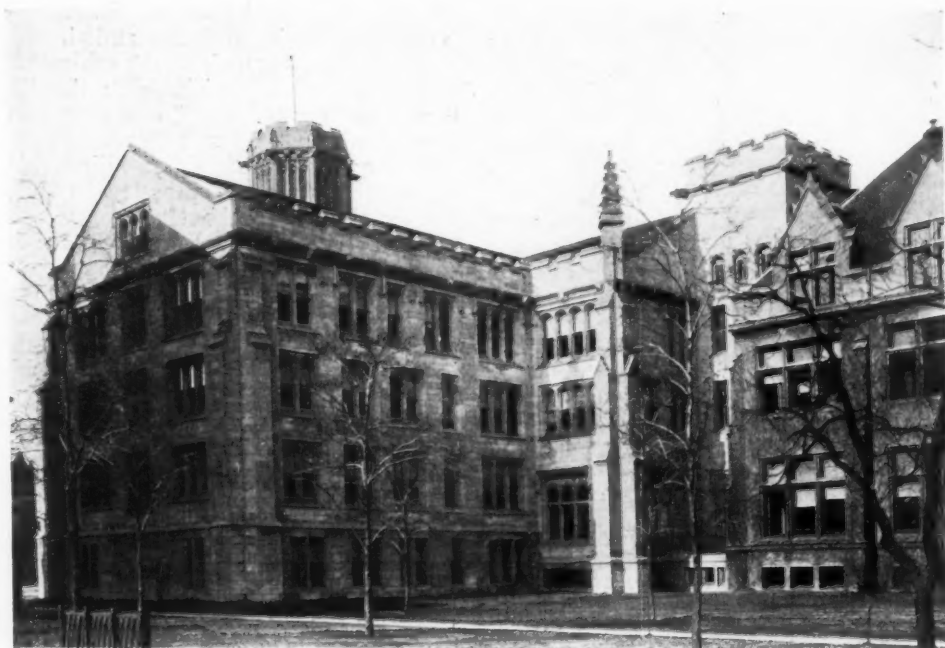
His designs for structures to follow Cobb Hall were quite free in treatment and often followed precedents found in Earlier English Gothic. Thus, all of his buildings have roofs with a pitch of at least forty-five degrees, and all also are covered with red clay tiles. He also abjured ornamental battlements in almost every building. Since then red clay tile roofs have been used on all buildings, not only those designed by Mr. Cobb, but those by other architects as well; and I understand that they are now required by the university authorities.

Mr. Cobb designed all the buildings erected before 1900; that is, for nine years. Since then Hitchcock Hall, which is on the northwest corner of the original campus, has been designed by Dwight Heald Perkins; and Emmons Blaine Hall, which fronts south on the Midway Plaisance and occupies the whole front between Kimbark and Kenwood avenues, has been designed by James Gamble Rogers. Since 1900 all the new buildings have been designed by Shepley, Rutan and Coolidge, of Chicago and Boston, except Rosenwald Hall, which was designed by Holabird and Roche. Rosenwald Hall, the Classics Building and the Ida Noyes Hall will constitute the subjects of the present article. They are the last three buildings completed and have been erected within the last two years in the following order of time: First, the Classics Building, called the Hiram Kelly Memorial, finished about two years ago; second, the Julius Rosenwald Hall, completed about the same time; and third, the Ida Noyes Hall, completed last summer.

The University of Chicago is remarkable in the annals of American architecture, in that it is the newest and one of the largest of American seats of learning, that all its buildings are in some form of English Gothic, and that all are built of uniform materials. I do not know of any other that is like it in these respects, though the Washington University at St. Louis may come nearest to it. Some of the universities have within a few years adopted the Gothic as the future style of their new buildings, as, for instance, Princeton. The new Columbia Univer-



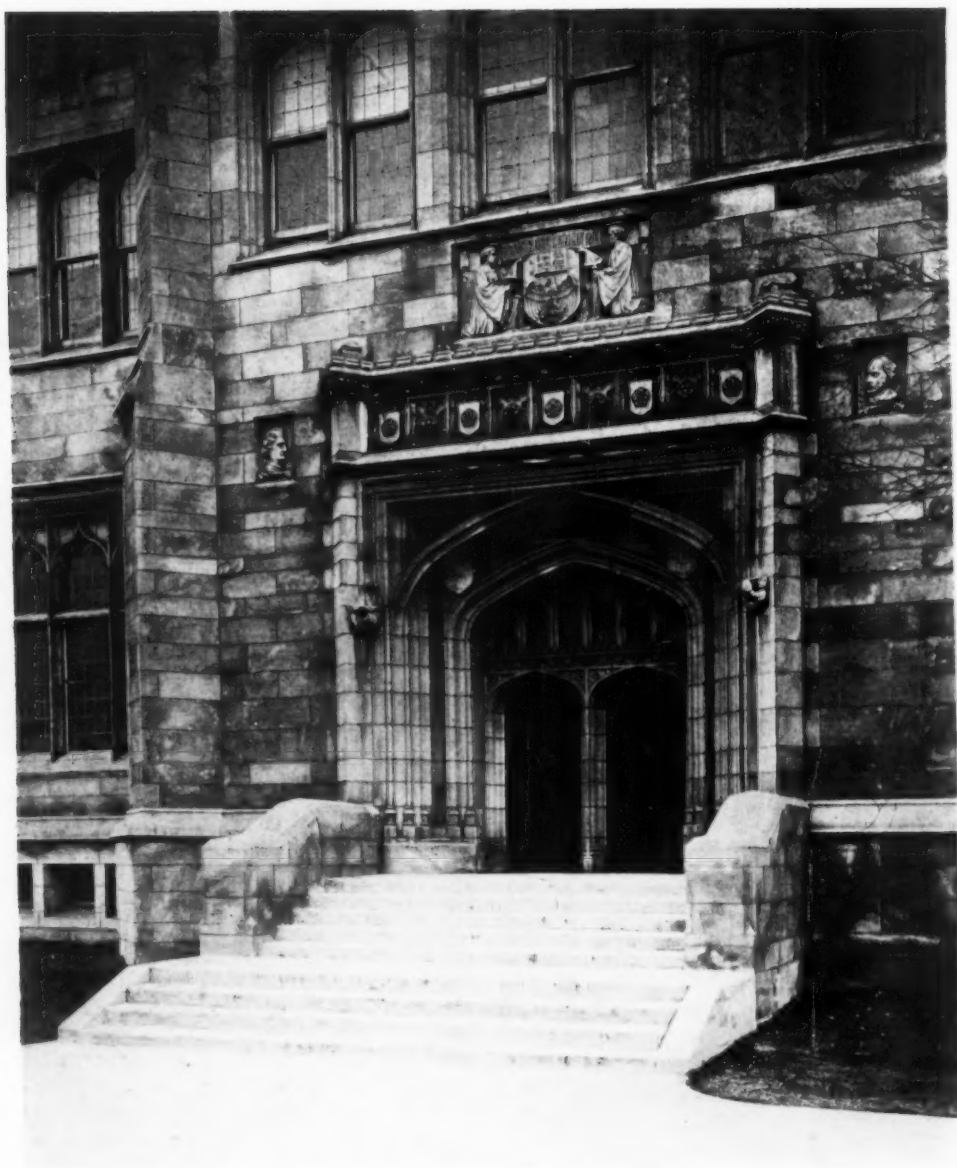
VIEW FROM THE SOUTHWEST—ROSENWALD HALL, UNIVERSITY OF CHICAGO.



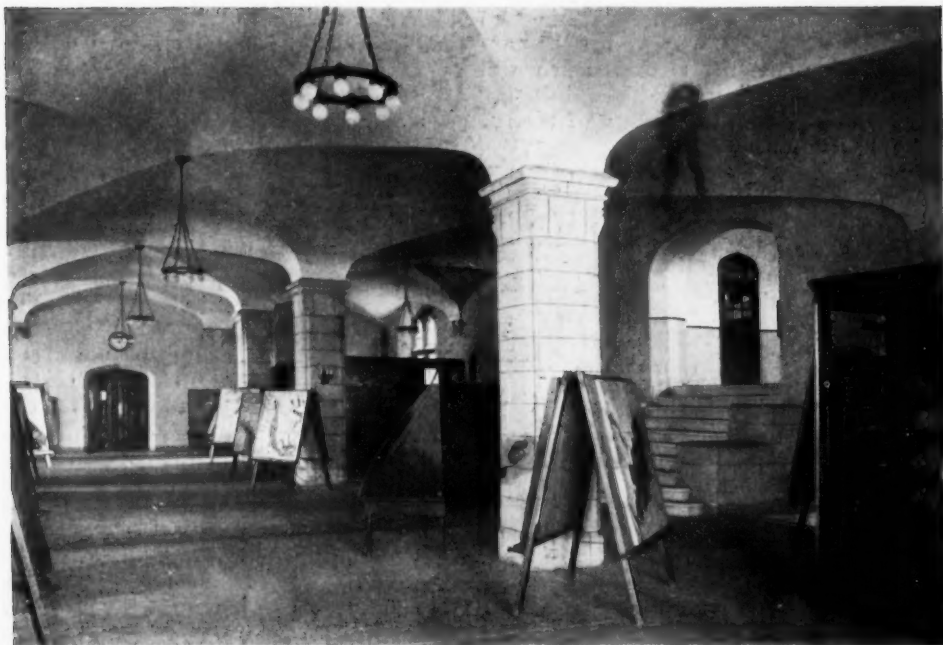
VIEW FROM WOMEN'S COURT, SOUTHEAST, SHOWING WALKER MUSEUM ON THE RIGHT—ROSENWALD HALL, UNIVERSITY OF CHICAGO.



ENTRANCE FRONT, FROM THE NORTHWEST—
ROSENWALD HALL, UNIVERSITY OF CHICAGO.



MAIN ENTRANCE ON NORTH FRONT—ROSEN-
WALD HALL, UNIVERSITY OF CHICAGO.



MUSEUM, ON FIRST FLOOR—ROSENWALD HALL, UNIVERSITY OF CHICAGO.

sity at New York, now occupying its third site, had adopted the Gothic for the site that it last abandoned, but adopted a form of Renaissance in its present buildings, except as to its Chapel. The College of the City of New York was entirely rebuilt in the Gothic style, though I have heard of a recent building erected for it, for athletic purposes, which is not Gothic. This college is more uniformly Gothic, if I am not mistaken, than any other except the University of Chicago.

The result of twenty-five years of work by different architects at the University of Chicago in the Gothic style is an interesting study, and it can be justly said that it is not characterized by any blunders. Mr. Cobb's buildings are all good in design, and there are evidences of progress in many of them. The quadrangle surrounded by the Hull Biological Laboratories and the Physiology and Botany Buildings, on the north side of the campus, with its separate gateways north and south, is very impressive. East of it Hutchinson Court, bounded by Hutchinson Hall, Mitchell Tower, the Reynolds Club and Cloister and Leon Mandel Hall,

is the most impressive of the groups of buildings, all of which were designed by Shepley, Rutan and Coolidge. They show a decided progress over the work of Mr. Cobb and are consistent examples of English Perpendicular architecture. It is in this group that modern scientific building methods were first introduced in the construction of Gothic buildings for the university, much steel having been used while preserving the style as far as the exteriors and interiors can now be seen.

In the three newest buildings there is a still greater progress in respect to construction, and more independence in details, as will be seen in the illustrations published herewith. There is a modern spirit in all of them, and while the exteriors reflect the influence of the fourteenth and fifteenth centuries upon their design, the interiors are better adapted to the practical uses for which they were intended. Steel construction and the most recent improvements in the science of fireproofing have been employed. This has made it possible to plan the several floors with such differences in the ar-

range of rooms as fit them best to their several purposes. It has demonstrated also that the modern spirit will eventually prevail in gradually bringing the university architecture out of the rut of old precedents; possibly, if this progressive tendency continues, there will here be developed from the remote influence of medieval architecture a newer and a better architecture without creating an unpleasant contrast with that which the first board of trustees instituted.

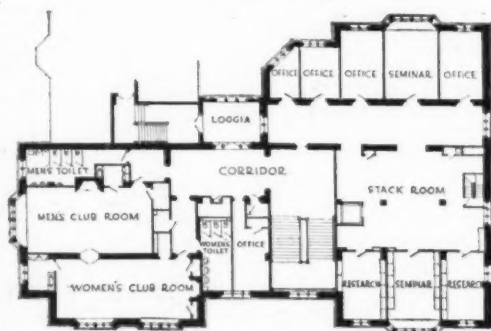
It is pleasant also to be able to say that all the architects who have been employed on the university have worked in a fraternal spirit, and have striven to produce a harmonious whole. There have been attempts to reproduce some of the famous monuments of antiquity which have been more or less successful, principally less; but these may have been due to the influence of superior authority, and it is to be hoped that they are not to be repeated. For anyone who attempts to reproduce King's College Chapel at Cambridge will be open to criticism for trying to do the impossible, and the same may be said in a lesser degree with respect to Christ Church Hall at Oxford.

We now come to view the three latest additions to the architecture of the university.

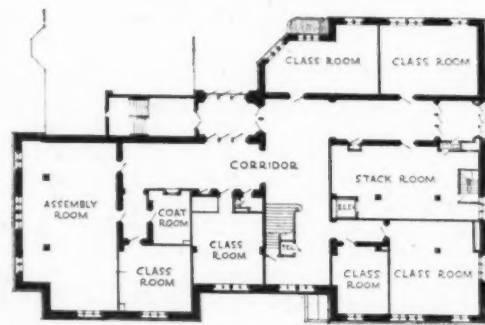
The Julius Rosenwald Hall, completed after designs by Holabird and Roche, is practically an extension of Walker Museum, which it adjoins on its east side. It was presented to the university by Julius Rosenwald as one of the munificent gifts which he bestowed on the city of Chicago on his fiftieth birthday. The cornerstone was laid on June 9, 1914, and the building was dedicated in March, 1915. The problem in design included not only the provision of a building suitable to the purpose of the departments to occupy it, Geology and Geography, but the architectural relation of the new structure to Walker Museum on the east and the Law School on the south. The character and uses of the hall have been clearly expressed in the stone carvings. I am indebted to Professor David Allan Robertson, secretary to the president, for much of the in-



THIRD FLOOR PLAN



SECOND FLOOR PLAN

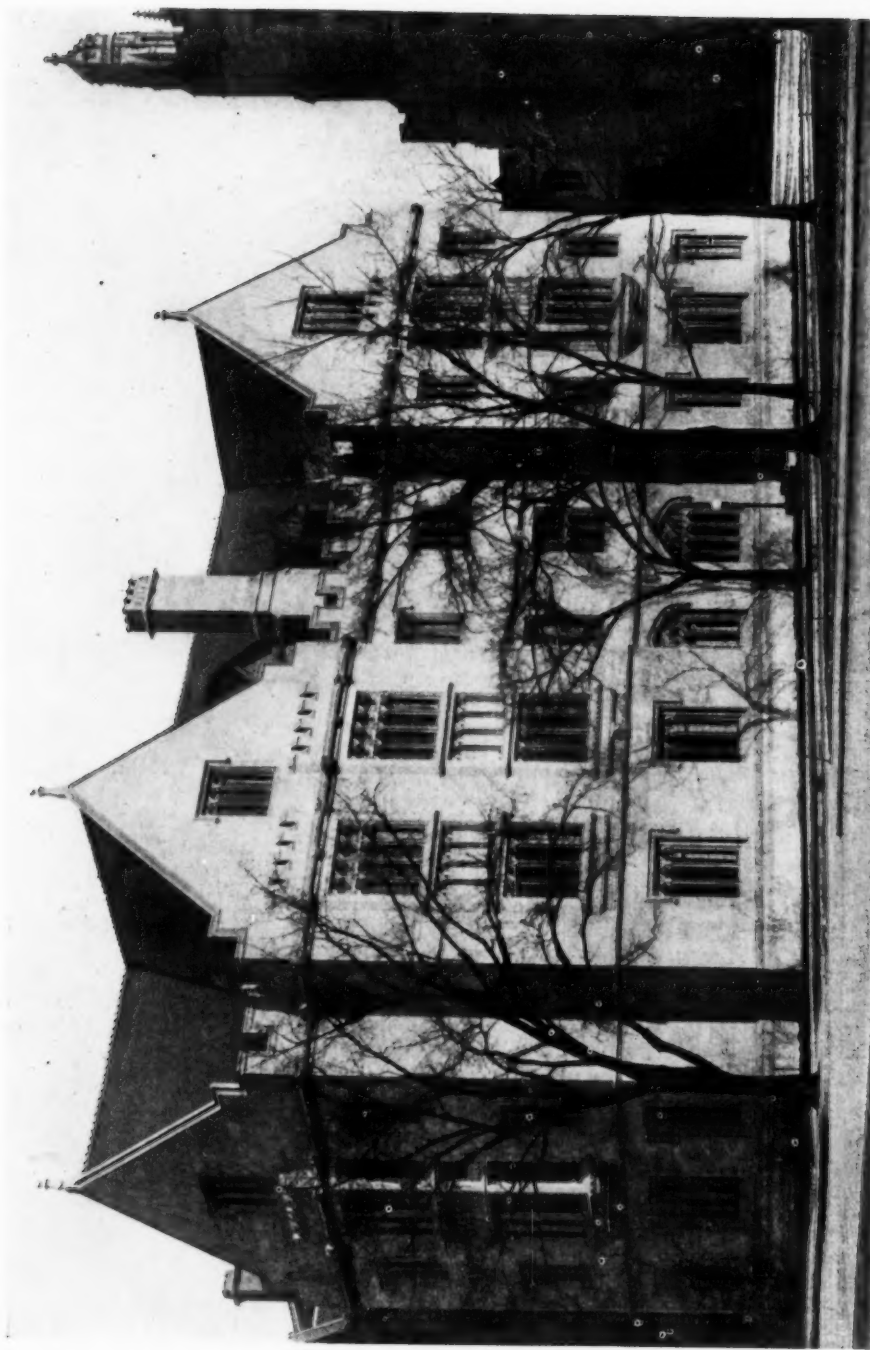


FIRST FLOOR PLAN

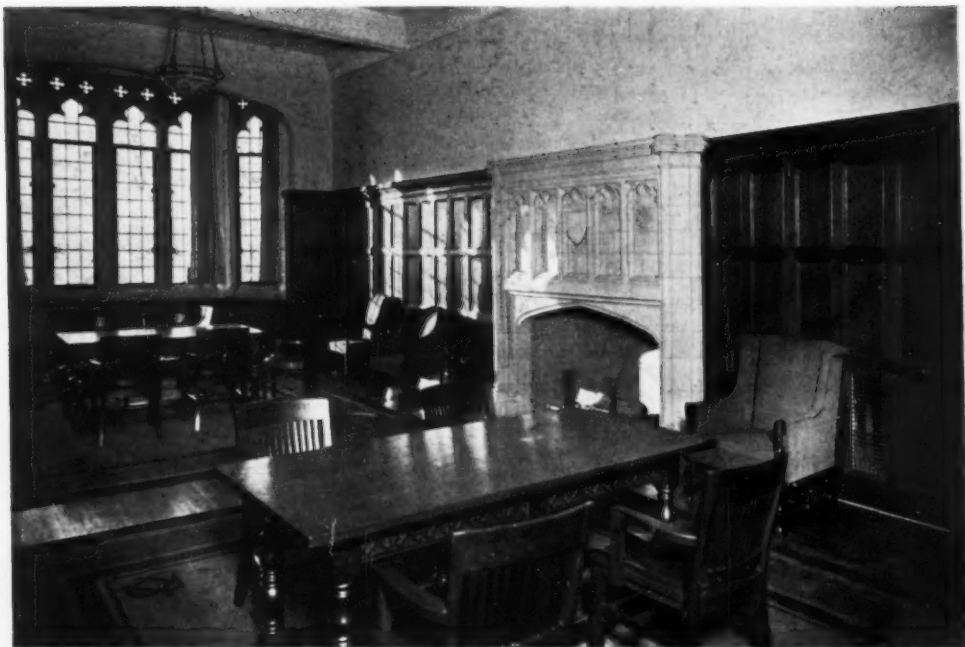
CLASSICS BUILDING, UNIVERSITY OF CHICAGO.

formation that follows.

Above the main entrance, in a panel, is the seal of the university, surmounted by a scroll bearing the name of the building. The supporters of the shield are students,



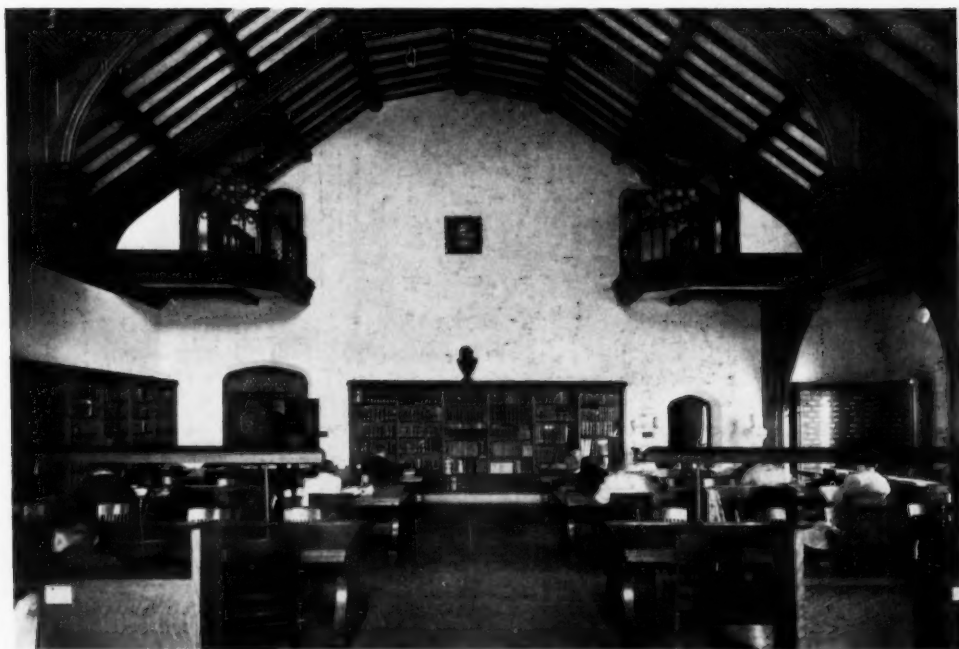
CLASSICS BUILDING, FROM THE SOUTHWEST, HARPER
LIBRARY ON THE RIGHT—UNIVERSITY OF CHICAGO.



MEN'S CLUB ROOM, ON SECOND FLOOR—CLASSICS BUILDING, UNIVERSITY OF CHICAGO.



WOMEN'S CLUB ROOM, ON SECOND FLOOR—CLASSICS BUILDING, UNIVERSITY OF CHICAGO.



GENERAL READING ROOM, ON THIRD FLOOR—CLASSICS BUILDING, UNIVERSITY OF CHICAGO.

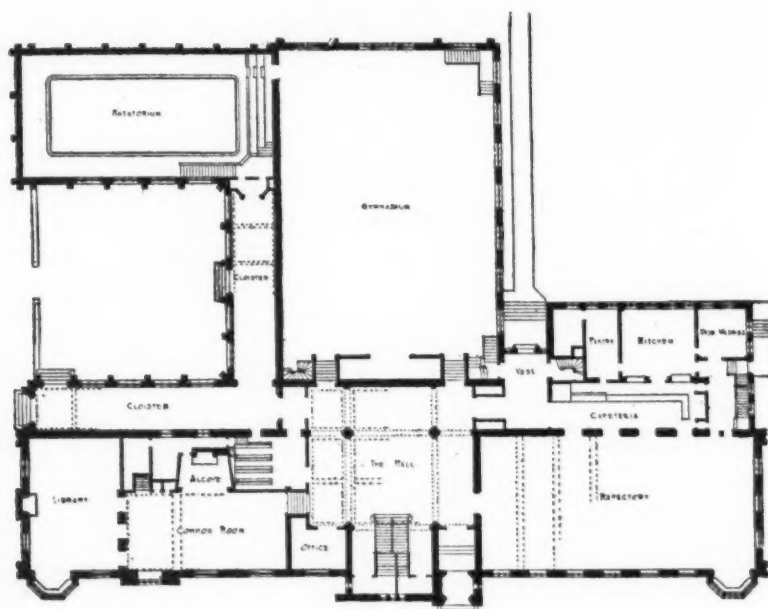
capped and gowned, one carrying in his hand a hammer and the other a theodolite. The cornice of the porch, immediately below, is decorated with carved roses; and the alternate panels of the frieze below it are also decorated with roses on shields, an allusion to the name of the donor, it is said. In a panel in the main wall to the right of the structural portico which surrounds the main entrance door is a relief portrait of Lyell; on the left is one of Dana. On the spandrils of the inner arch forming the doorway are the seals of the State of Illinois on the left and of the City of Chicago on the right. The corbels under the ends of the label molding which surrounds the outer arch have been carved, on the left, with the representation of an aged man casting away an old globe shrunken by time and scarred by volcanic devastation; to the right is the figure of a child spinning a chaotic mass into the form of a globe and sending it forth to find its destiny among the celestial spheres. One is rather startled to see such grotesques on a twentieth century building. It all demonstrates that we are groping our way to imbue our

architecture with a modern spirit, but that we lack the experience which enabled the medieval carvers to do such things in a skilful way.

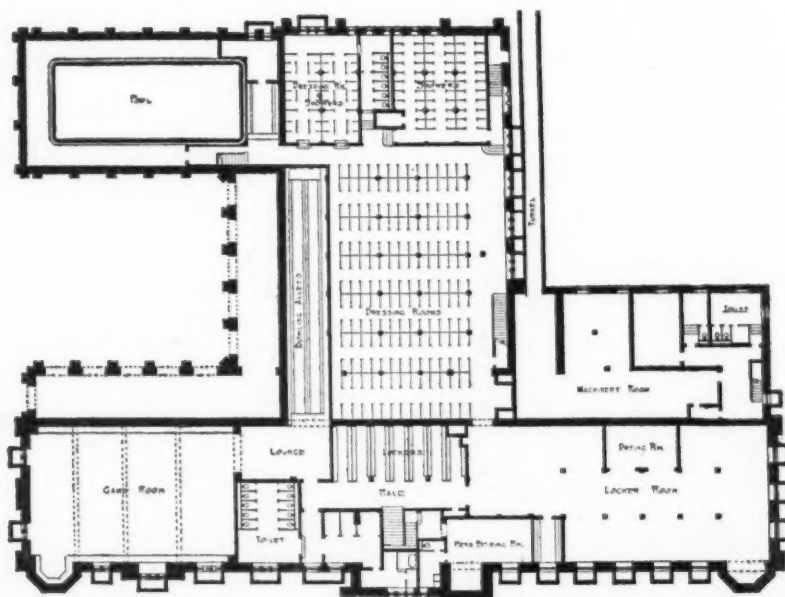
There are gargoyles, too, whether with real water spouts or not is uncertain, but they greatly help the profiles at the angles of the building. All of these lively carvings and many more comprise a list of nearly all the great scientists and explorers who have enriched the world's knowledge of geology and geography.

In the basement, in addition to conference rooms for classes in general geology, is a lecture room seating one hundred persons. The basement provides space also for a dark room and rooms for dynamic geology, mineralogy, physiographic modeling, lathe and section work, a high temperature and high pressure laboratory, and a workshop. Beside the stairs is a seismograph for which there was erected on the solid rock, sixty-two and one-half feet below the floor, a concrete pillar four feet square. The seismograph records will be maintained by the U. S. Weather Bureau.

On the first floor is a museum room,

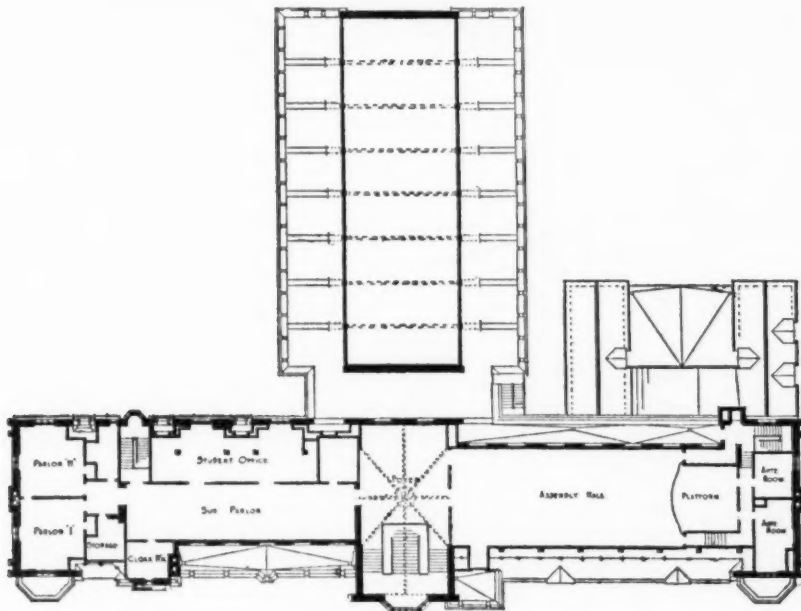


Plan of First Floor.

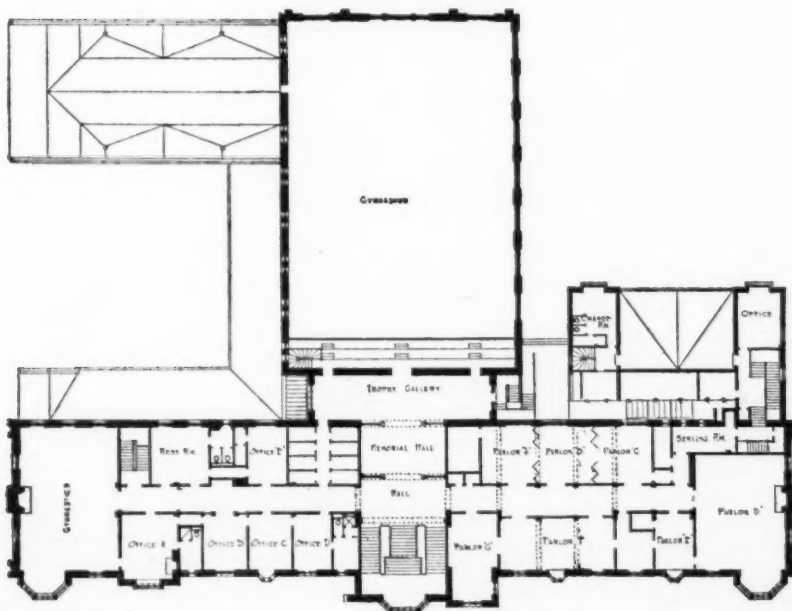


Plan of Basement.

IDA NOYES HALL, UNIVERSITY OF CHICAGO.

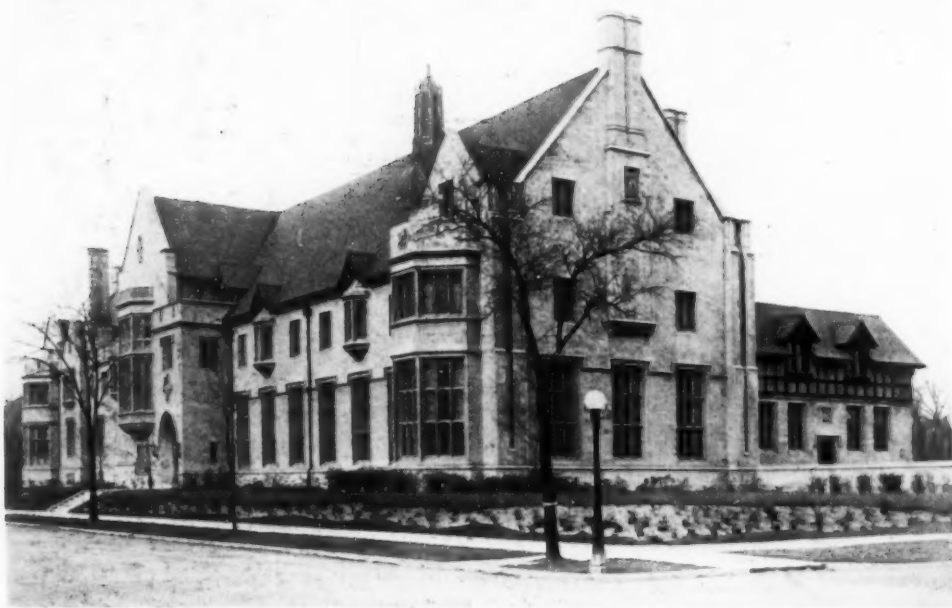


Plan of Third Floor.



Plan of Second Floor.

IDA NOYES HALL, UNIVERSITY OF CHICAGO.



IDA NOYES HALL, FROM THE SOUTHEAST, FRONTING ON THE MIDWAY PLAISANCE AND KIMBARK AVENUE—UNIVERSITY OF CHICAGO.

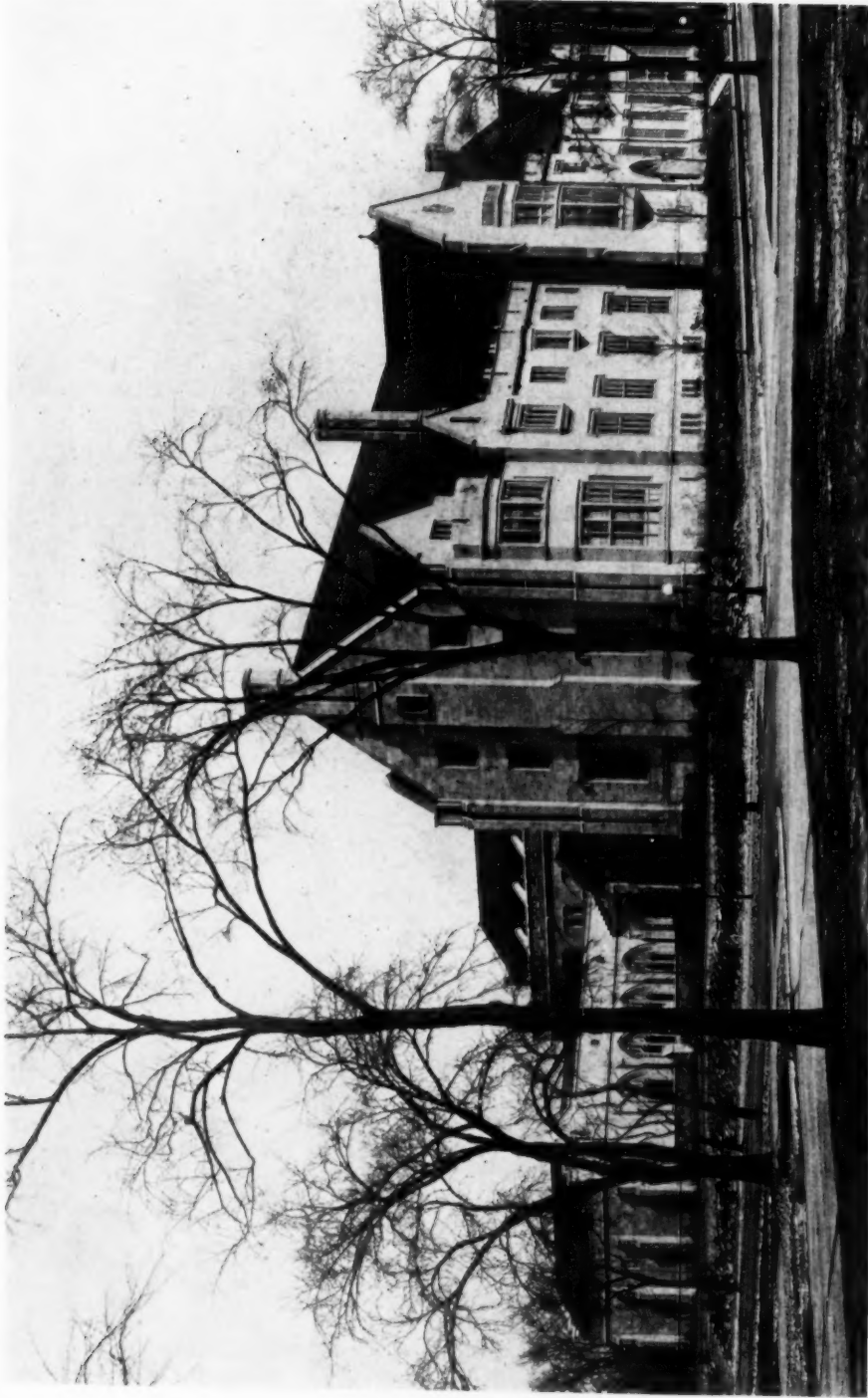
which is a continuation of the museum on the first floor of the Walker Museum, to which it is joined. Forming the vestibule at the north entrance is a carved oak screen in which corbels bear reliefs of the heads of Humboldt, Richtofen, Le Conte, Powell, Shaler and Sir John Murray, portraits not selected as personal memorials, but as emblems of progress in the earth sciences.

On the second floor are the offices of the heads of departments of Geology and Geography, also a seminar room, class rooms, library and reading room.

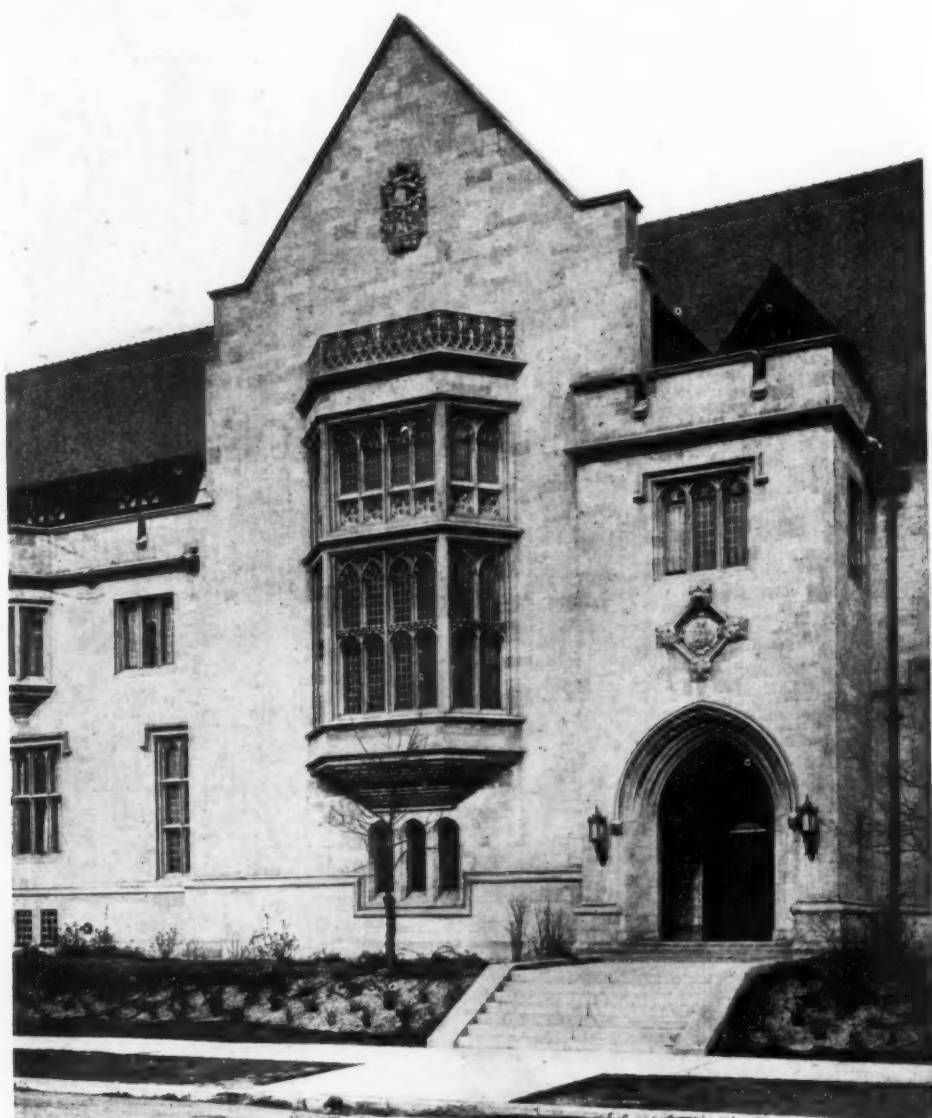
The best view of Rosenwald Hall is from Harper Court on the southwest. This takes in practically the whole of the building on that side and shows the whole height of the octagonal stairway tower. This is carried up above the roof, for the use of meteorological instruments, which are not yet all installed. It is well framed by the darker Law Building, on the right, which puts it only partly in shadow. There is an entrance to the lecture hall, with a vestibule at the base of the tower; and the whole is admirably grouped.

The Classics Building, which forms the southwest corner of the most important group of buildings, is by Shepley, Rutan and Coolidge. It has fronts both on the Midway Plaisance, at the south, and Ellis avenue, on the west. But its main entrance is from the campus, where it adjoins Divinity Hall, one of the first buildings erected for the university. There is another entrance on the east side, but this will ultimately be connected with a building yet to be erected uniting it with the William Rainey Harper Memorial Library. The Classics Building is known as the Hiram Kelly Memorial, and was built from a bequest by Mrs. Hiram Kelly, the donor also of Kelly Hall and Green Hall. Its cornerstone was laid June 9, 1914, and it was completed in March, 1915. It contains a large collection of reference books pertinent to classical studies and general literature, and will be connected with the Harper Memorial Library when an intermediate building, for which the plans have already been drawn, is erected.

On the second floor are offices of professors in the departments of the classical



IDA NOYES HALL, FROM THE SOUTHWEST, FRONTING ON
THE MIDWAY PLAISANCE—UNIVERSITY OF CHICAGO.



MAIN ENTRANCE, FROM THE MIDWAY PLAISANCE—
IDA NOYES HALL, UNIVERSITY OF CHICAGO.



TERRACE ON THIRD FLOOR, SOUTH FRONT, SHOWING CAST LEAD VENTILATOR OVER TILE ROOF; THE HALF-TIMBERED CONSTRUCTION IS OF SOLID OAK, FILLED IN WITH HOLLOW TILE AND FIREPROOFED ON THE INSIDE.

group of studies, a men's common room and a women's common room. The women's common room is provided with a kitchenette and with facilities for furnishing luncheons and teas. For large gatherings these two rooms can be thrown into one.

On the third floor are rooms for the Departments of Paleography and Epigraphy, the Department of History of Art, the library adviser, and the main reading room. This room is finished up to the roof. The roof is of fireproof construction, but there is a suggestion of a hammer beam roof under it as a decorative feature. It contains carved wooden escutcheons with the names and crests of Erasmus and Sir Thomas More. There are additional rooms in those parts of the fourth story not occupied by the reading room.

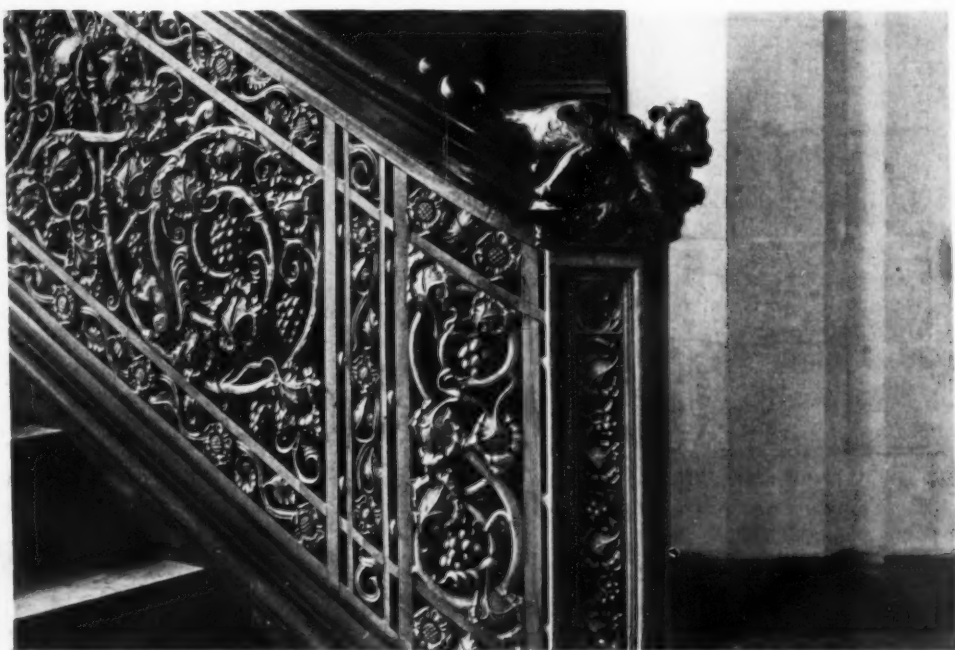
Architecturally, the Classics Building conforms to the spirit of the Harper Library, which was designed by the same architects, and it groups in very well with the contiguous buildings north of it, to which it is attached, and which were de-

signed by Mr. Cobb. The carved stone work is also original and not copied from Gothic sculpture.

At the south front of the block bounded by Kimbark avenue, on the east, and Woodlawn avenue, on the west, stands Ida Noyes Hall, designed by Shepley, Rutan and Coolidge, of which firm Mr. Charles Coolidge is the only living member. The building was designed in the office of the firm at Chicago. Professor Robertson, in a recently published guide to the university, says most happily, referring to the woman after whom it is named: "As a memorial to such a woman—winning in personality, a lover of literature and art, wise in philanthropy, democratic in friendship, skilful in leadership, devoted to her home and her country—Ida Noyes Hall is dedicated to the life of the women of the University of Chicago." It is the gift of Mr. La Verne Noyes. The building, or rather group of buildings—for it comprises the functions performed for the men by the Bartlett Gymnasium, the Reynolds Club, and Hutchinson Commons—is more domestic in its purposes



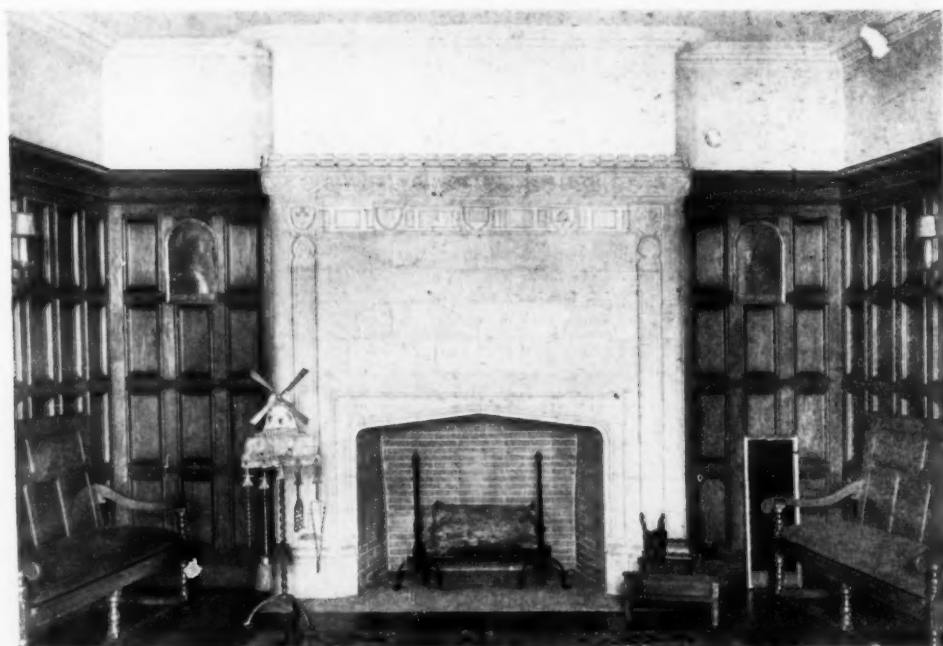
GRAND ENTRANCE HALL, PANELED WITH ENGLISH OAK—IDA NOYES HALL, UNIVERSITY OF CHICAGO.



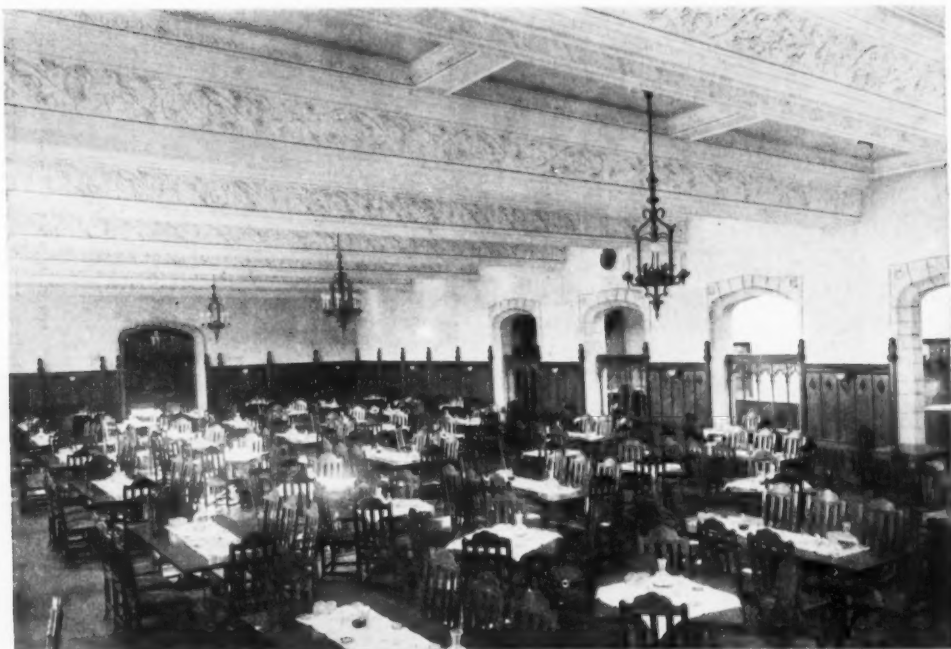
DETAIL OF MAIN STAIRWAY, SHOWING WROUGHT IRON RAILING WITH CAST IRON PERFORATED PANELS AND OAK RAIL WITH CARVED TERMINAL GROTESQUE.



COMMON ROOM, ON FIRST FLOOR, WEST OF GRAND ENTRANCE HALL—IDA NOYES HALL, UNIVERSITY OF CHICAGO.



CHIMNEY PIECE IN INGLE NOOK OF COMMON ROOM—IDA NOYES HALL, UNIVERSITY OF CHICAGO.



MAIN DINING HALL, ON FIRST FLOOR, EAST OF GRAND ENTRANCE HALL—IDA NOYES HALL, UNIVERSITY OF CHICAGO.



MEMORIAL HALL, OPPOSITE HEAD OF STAIRS ON SECOND STORY—IDA NOYES HALL, UNIVERSITY OF CHICAGO.

and more expressive in its architecture than most of the English Gothic buildings of the university, and tells its story as an athletic club house to the use of which only the women of the university are eligible. It is therefore a social home for women, with all the appurtenances and conveniences of the three buildings above referred to.

The main portion of the building has a frontage of 240 feet on Fifty-ninth street, which bounds the Midway Plaisance on its north side. Space enough is reserved on the site at the east and west ends for additions or for connecting buildings, as need may suggest. Ground was broken November 14, 1914, and the building was dedicated in June, 1916.

The floor plans published herewith show the general disposition of the basement and three upper stories of these buildings—for they are in fact three buildings, though intimately related—the club and social building at the south, the gymnasium immediately in the rear of it, and the pool or natatorium forming a wing to the gymnasium. The basement floors are almost entirely devoted to the service of the gymnasium and the natatorium. The cloister is a direct entrance to all three buildings, enabling students to enter from the university grounds. The entrance to the cloister is through the private garden, which is surrounded by a wall, not shown on the plans. The cloister garth is intended to be a flower garden.

The main south entrance is through a handsome vestibule going into the hall, the great central portion of the structure. This hall is wainscoted with English oak paneling ten feet high from the floor. The large piers and the corresponding pilasters on the walls are of polished stone from France, the internal structure being stanchions of steel covered with concrete fireproofing. The main stairway to the second and third stories rises from the center of the hall towards the front wall, and its platforms are in the large stone oriel window on the front. This stairway has a very original balustrade. The framework is of hand-wrought iron, the perforated panels are of cast iron, and the hand rails of oak.

The hand rail on each side terminates in carved oak grotesques.

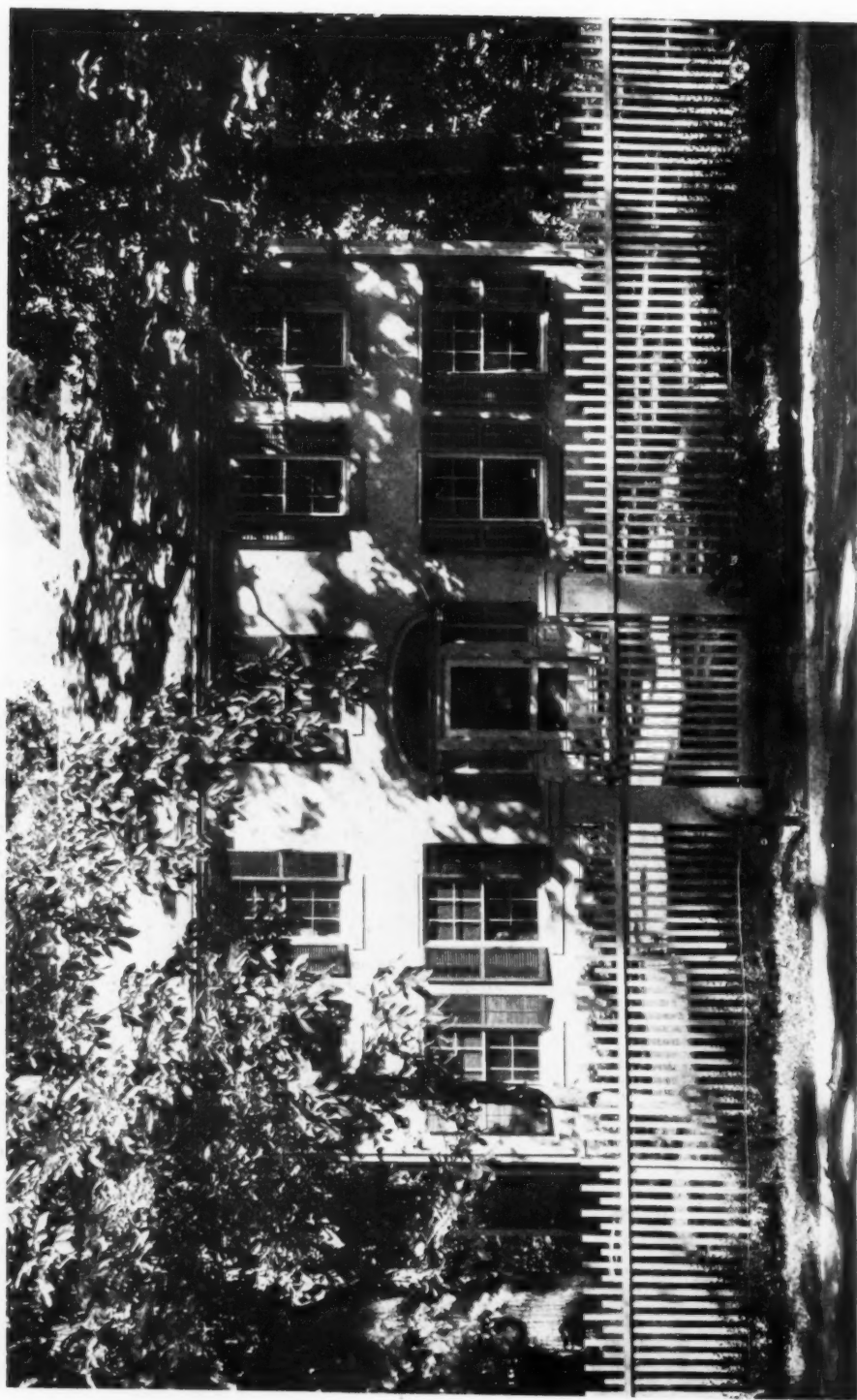
At the right of the hall as you enter is the refectory, attached to which are the cafeteria, kitchen and other offices for service. This is a room capable of seating 300 persons. It is eighteen feet high, and is unobstructed by columns; the floors above are supported by steel girders in a very rational but un-Gothic manner. On the opposite side of the hall is the common room, the ceiling of which is built in the same manner as that of the refectory. But still it has been given a Gothic feeling by the paneled oak wainscot which surrounds its walls.

To the rear of the central hall is the completely appointed gymnasium, while beneath it and under nearly the whole building is a bewildering array of dressing rooms, lockers, baths and everything necessary for the physical comfort of the women of the university. The natatorium occupies a building by itself from the basement floor to its own skylighted roof, and it is perfection in all its details.

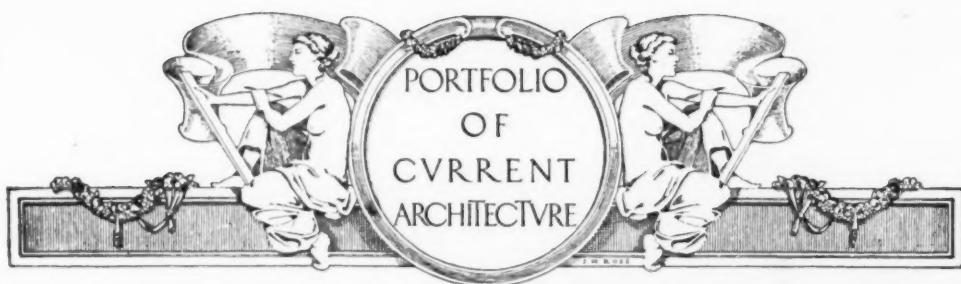
On the second floor, reached by the main stairway, there is a memorial room in the center of the building, and to the north of it a trophy room, which opens upon the spectators' gallery of the gymnasium. There is a Department of Physical Culture in the building, with offices on the second floor. There are also rooms for an examining physician, and a suite for the general director and for members of the instructional staff.

The hall of the third floor is the foyer of the assembly room, which occupies the whole east end of this floor. At the west side is a large sun parlor, with terrace on its south front, above the main cornice. There are also two parlors at the extreme west end of this story, and large lunch rooms for students residing in the city who bring their lunches; in fact, there are vastly more conveniences and comforts provided for the women students in this building than ever were heard of before.

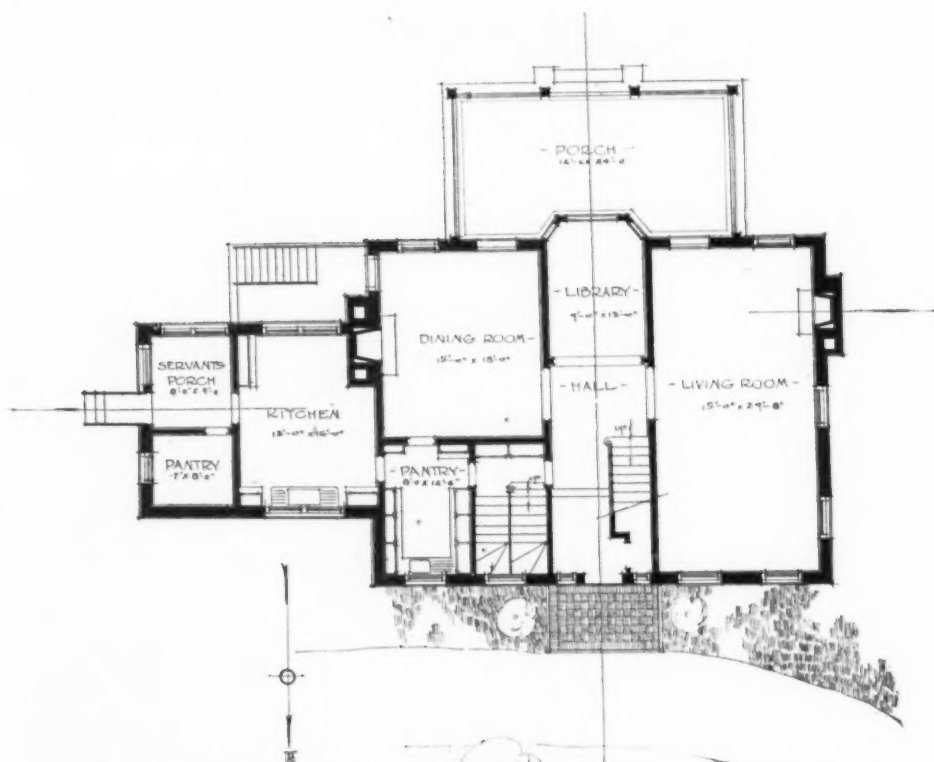
With these remarks, we regretfully leave this great and beneficent institution, filled with impressions of the contributions it has made to architectural art in the nineteenth and twentieth centuries.



RESIDENCE OF JOSEPH HUSBAND, ESQ., WIN-
NETKA, ILL. OTIS & CLARK, ARCHITECTS.



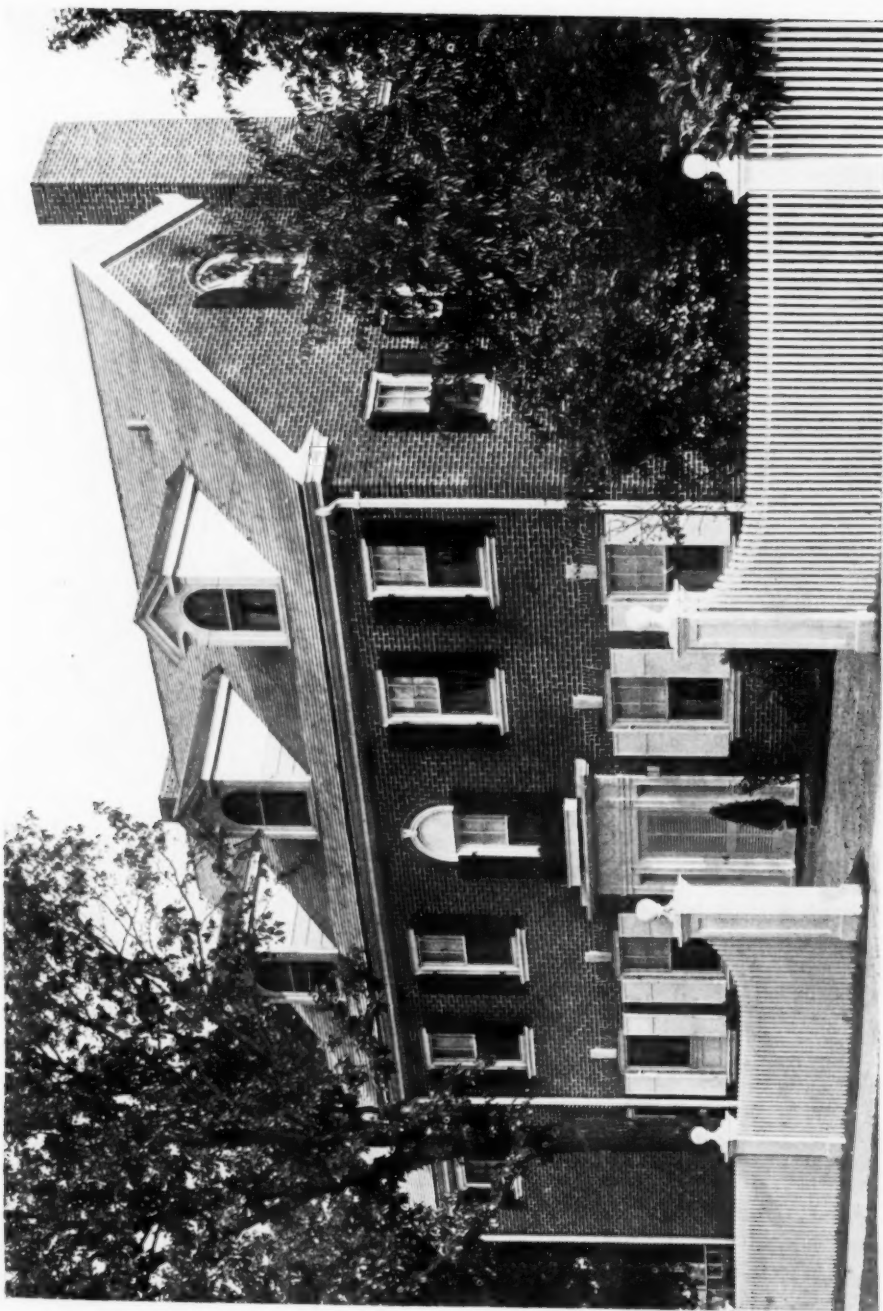
ENTRANCE—RESIDENCE OF JOSEPH HUSBAND, ESQ.,
WINNETKA, ILL. OTIS & CLARK, ARCHITECTS.



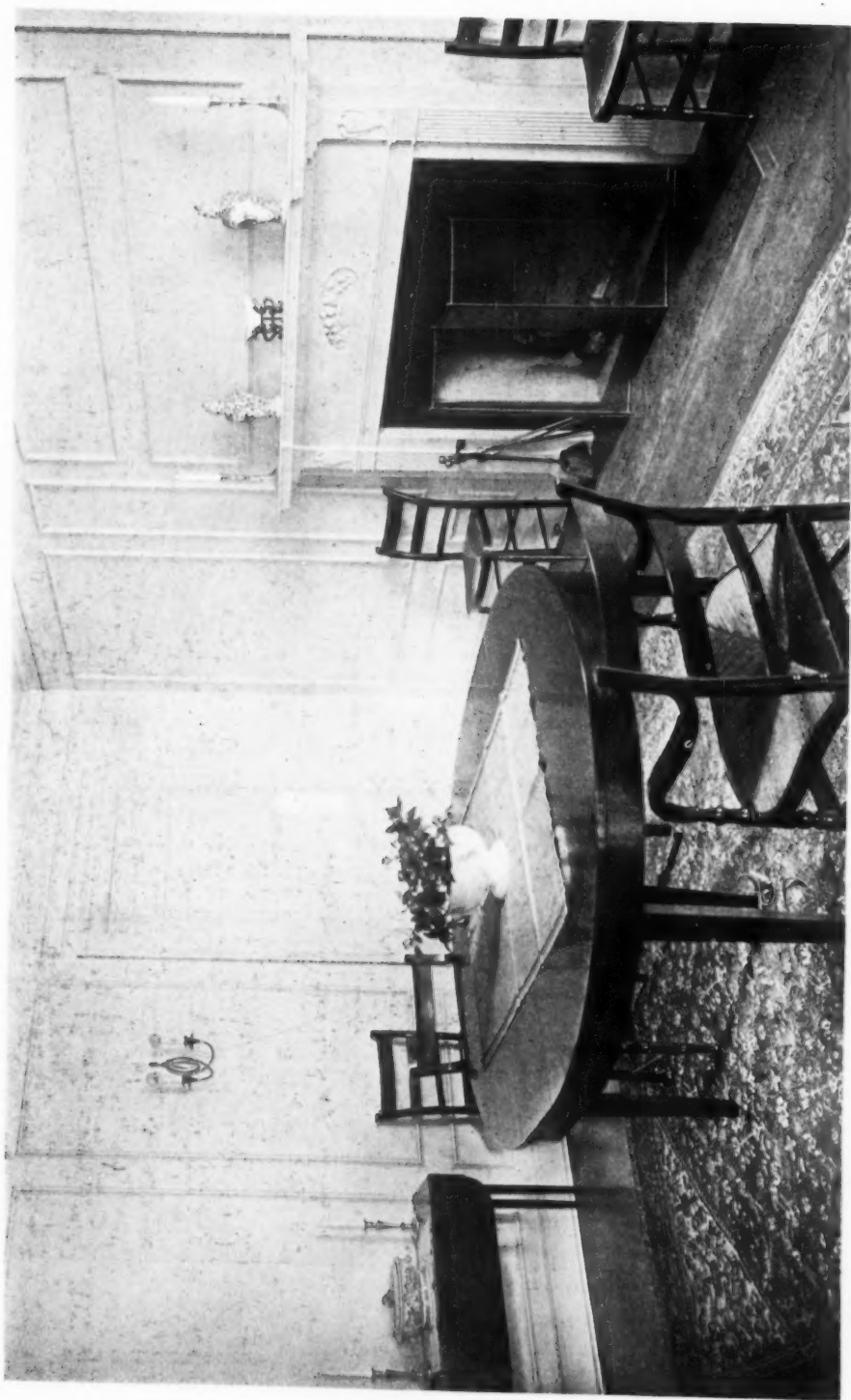
FIRST FLOOR PLAN—RESIDENCE OF WILLIAM H. MARTIN, ESQ., WINNETKA, ILL.
Otis & Clark, Architects.



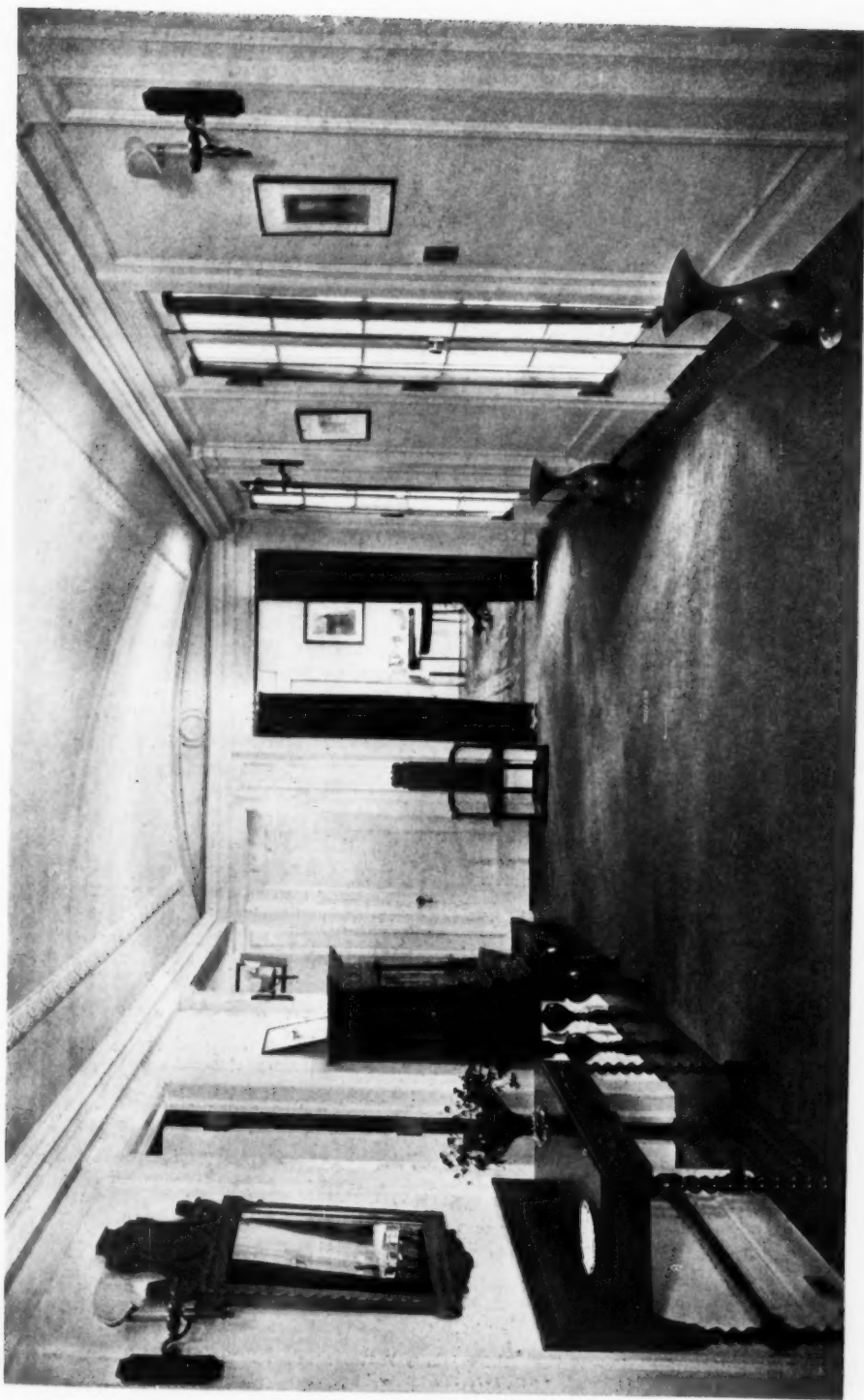
FIRST FLOOR PLAN—RESIDENCE OF JOSEPH HUSBAND, ESQ., WINNETKA, ILL.
Otis & Clark, Architects.



RESIDENCE OF WILLIAM H. MARTIN, ESQ.,
WINNETKA, ILL. OTIS & CLARK, ARCHITECTS.



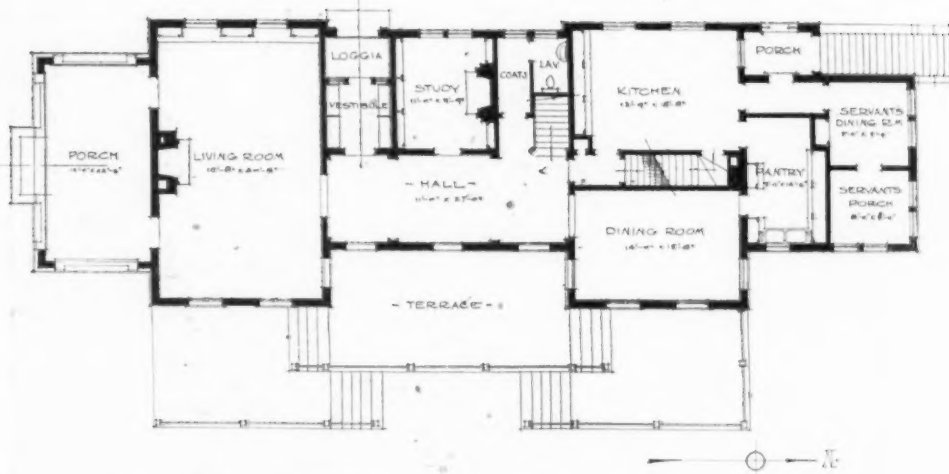
DINING ROOM - RESIDENCE OF WILLIAM H. MARTIN,
ESQ., WINNETKA, ILL. OTIS & CLARK, ARCHITECTS.



HALL—RESIDENCE OF DR. F. W. BLATCHFORD,
WINNETKA, ILL. OTIS & CLARK, ARCHITECTS.



RESIDENCE OF DR. F. W. BLATCHFORD, WINNETKA, ILL.
Otis & Clark, Architects.



FIRST FLOOR PLAN—RESIDENCE OF DR. F. W. BLATCHFORD, WINNETKA, ILL.
Otis & Clark, Architects.



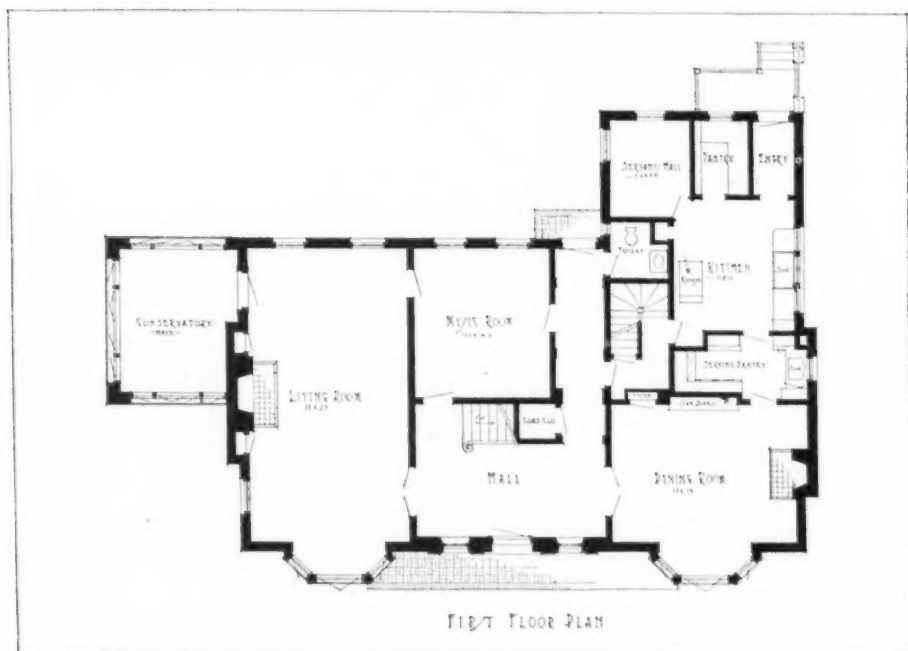
RESIDENCE OF DR. F. W. BLATCHFORD,
WINNETKA, ILL. OTIS & CLARK, ARCHITECTS.



RESIDENCE OF JAMES W. ROLLINS, ESQ., CROW POINT,
HINGHAM, MASS. OSCAR A. THAYER, ARCHITECT.

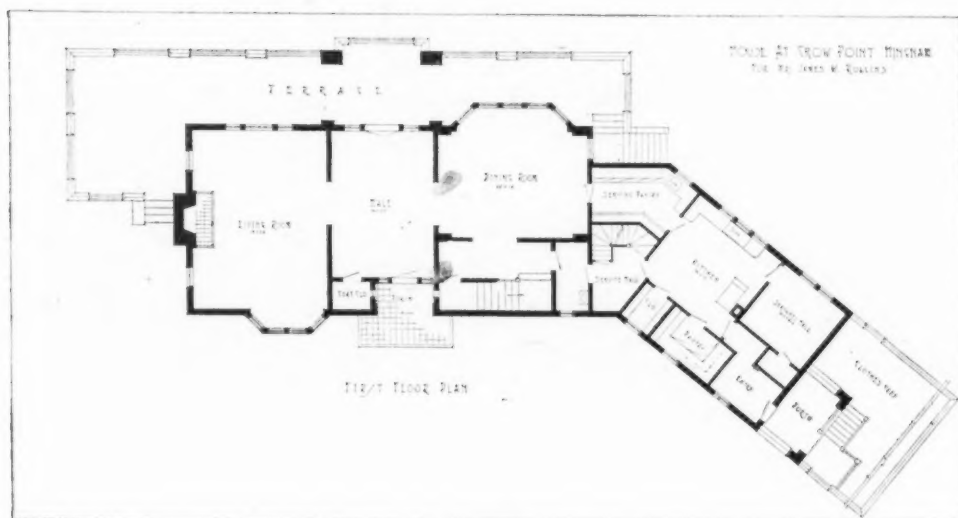


GARDEN FRONT—RESIDENCE OF ALFRED P. ROGERS, ESQ., CHEST.
NUT HILL, NEWTON, MASS. OSCAR A. THAYER, ARCHITECT.



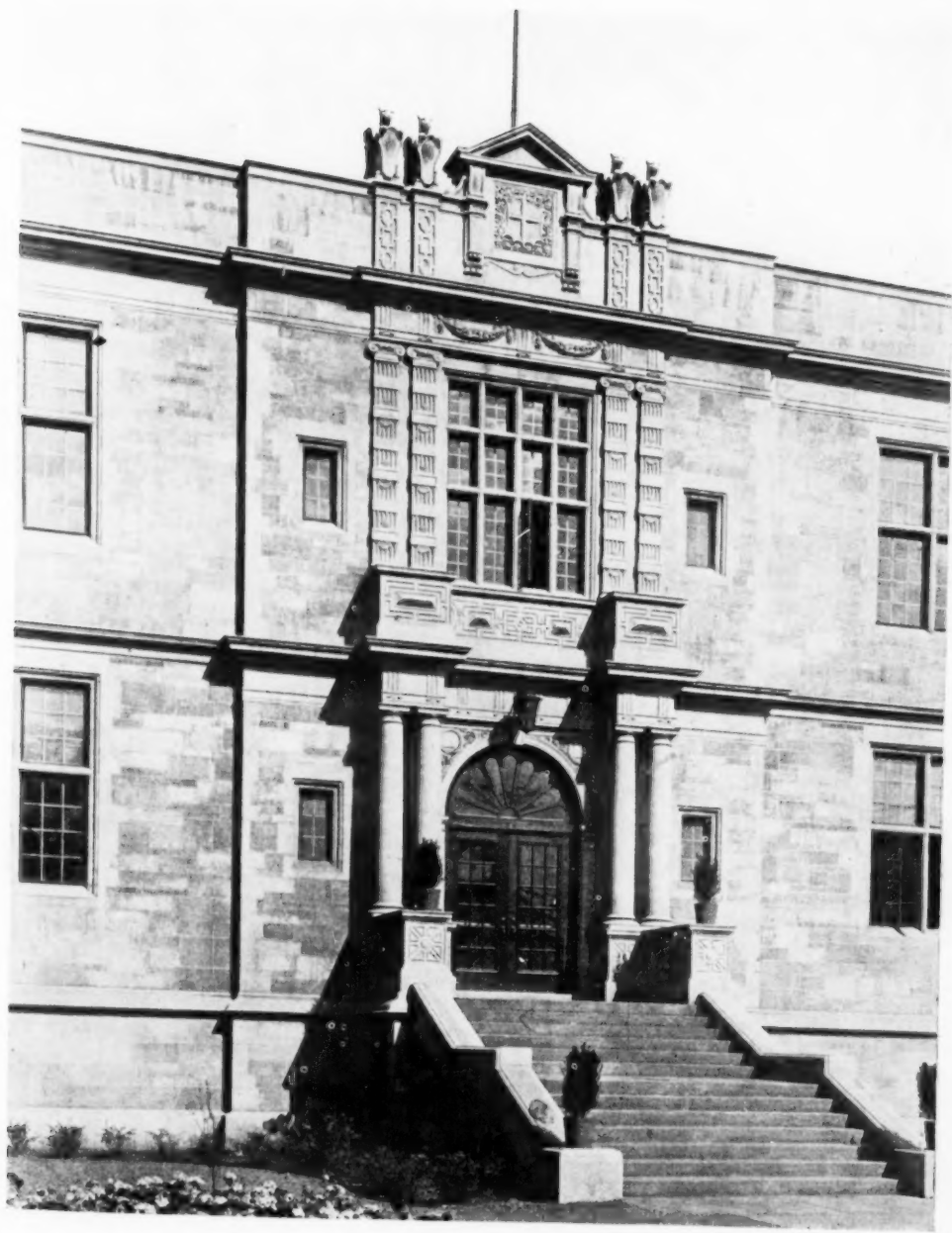
FIRST FLOOR PLAN—RESIDENCE OF ALFRED P. ROGERS, ESQ., CHESTNUT HILL, NEWTON, MASS.

Oscar A. Thayer, Architect.

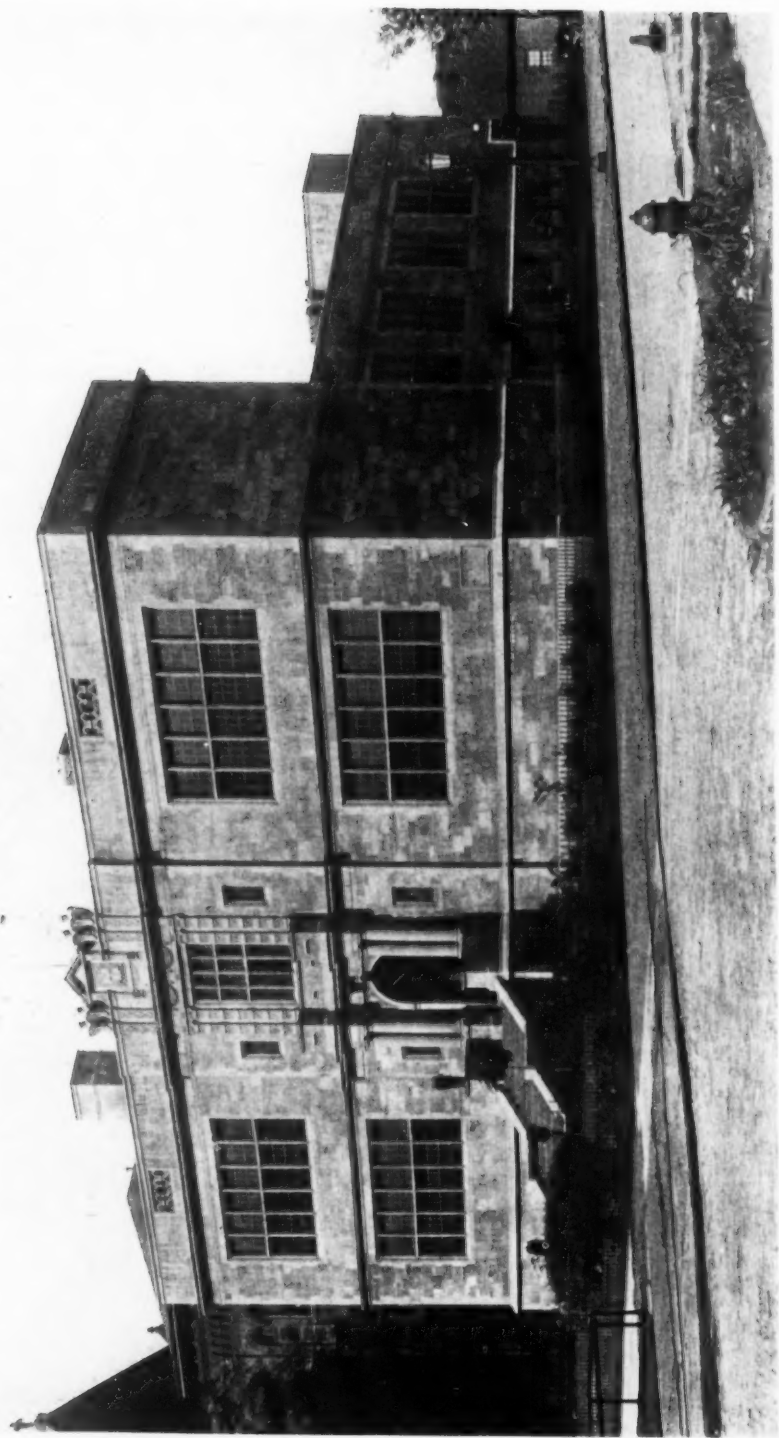


FIRST FLOOR PLAN—RESIDENCE OF JAMES W. ROLLINS, ESQ., CROW POINT, HINGHAM, MASS.

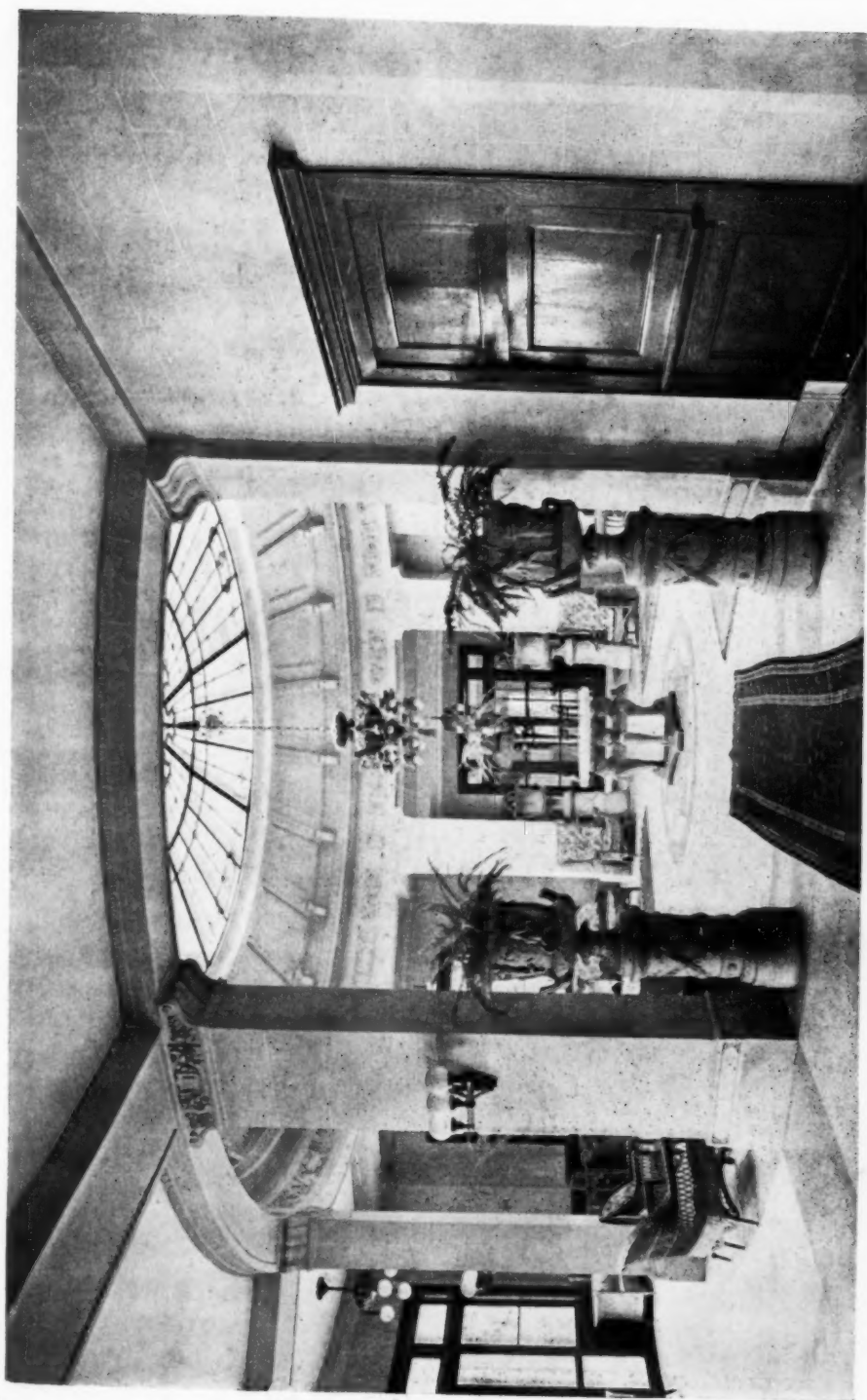
Oscar A. Thayer, Architect.



ENTRANCE—THE IMMACULATE CONCEPTION SCHOOL,
CLEVELAND, OHIO. HENRY A. WALSH, ARCHITECT.



THE IMMACULATE CONCEPTION SCHOOL, CLEVELAND, OHIO. HENRY A. WALSH, ARCHITECT.



THE PONTIAC, OSWEGO, N. Y.
GEO. B. POST & SONS, ARCHITECTS.



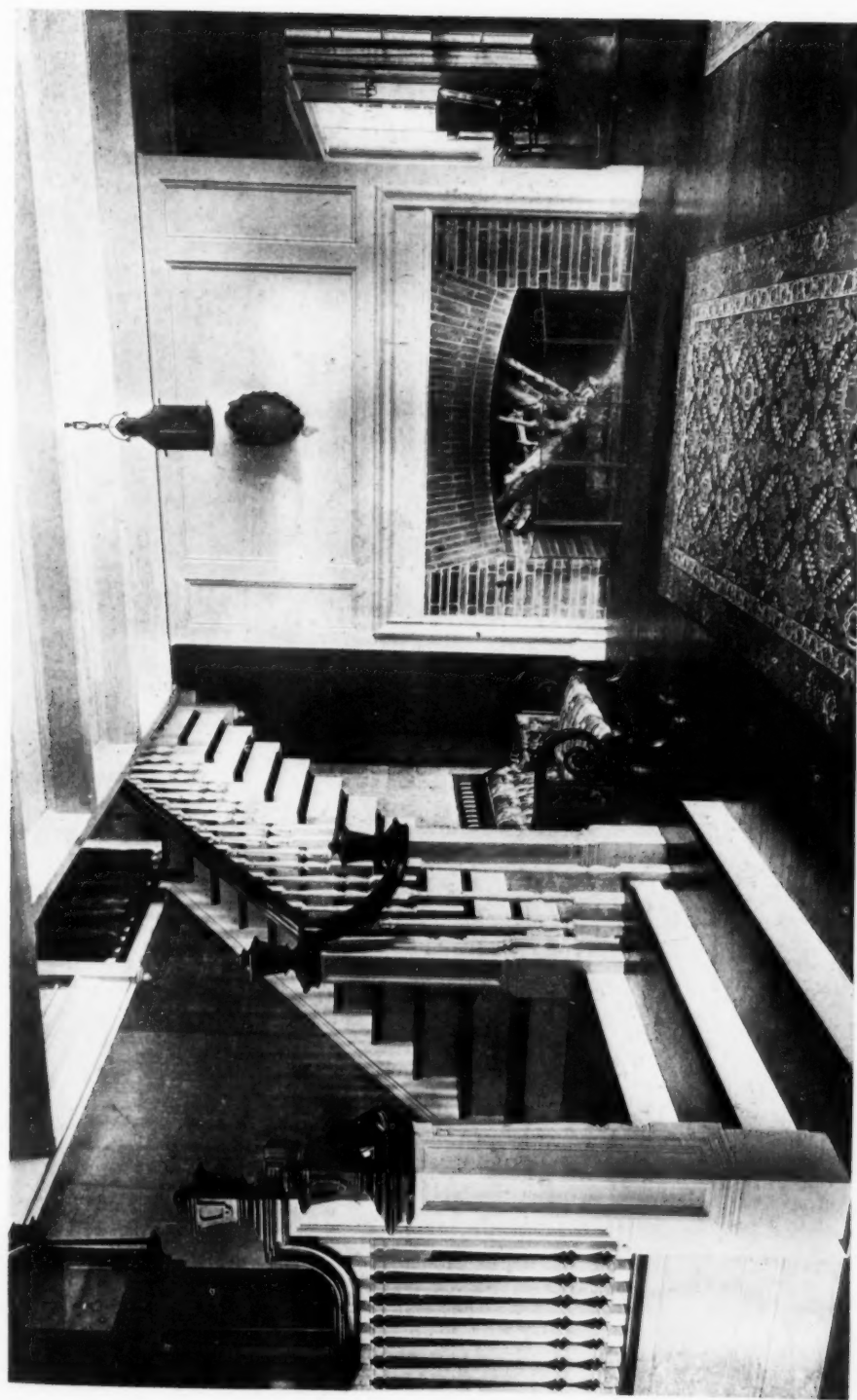
THE PONTIAC, OSWEGO, N. Y.
GEO. B. POST & SONS, ARCHITECTS.



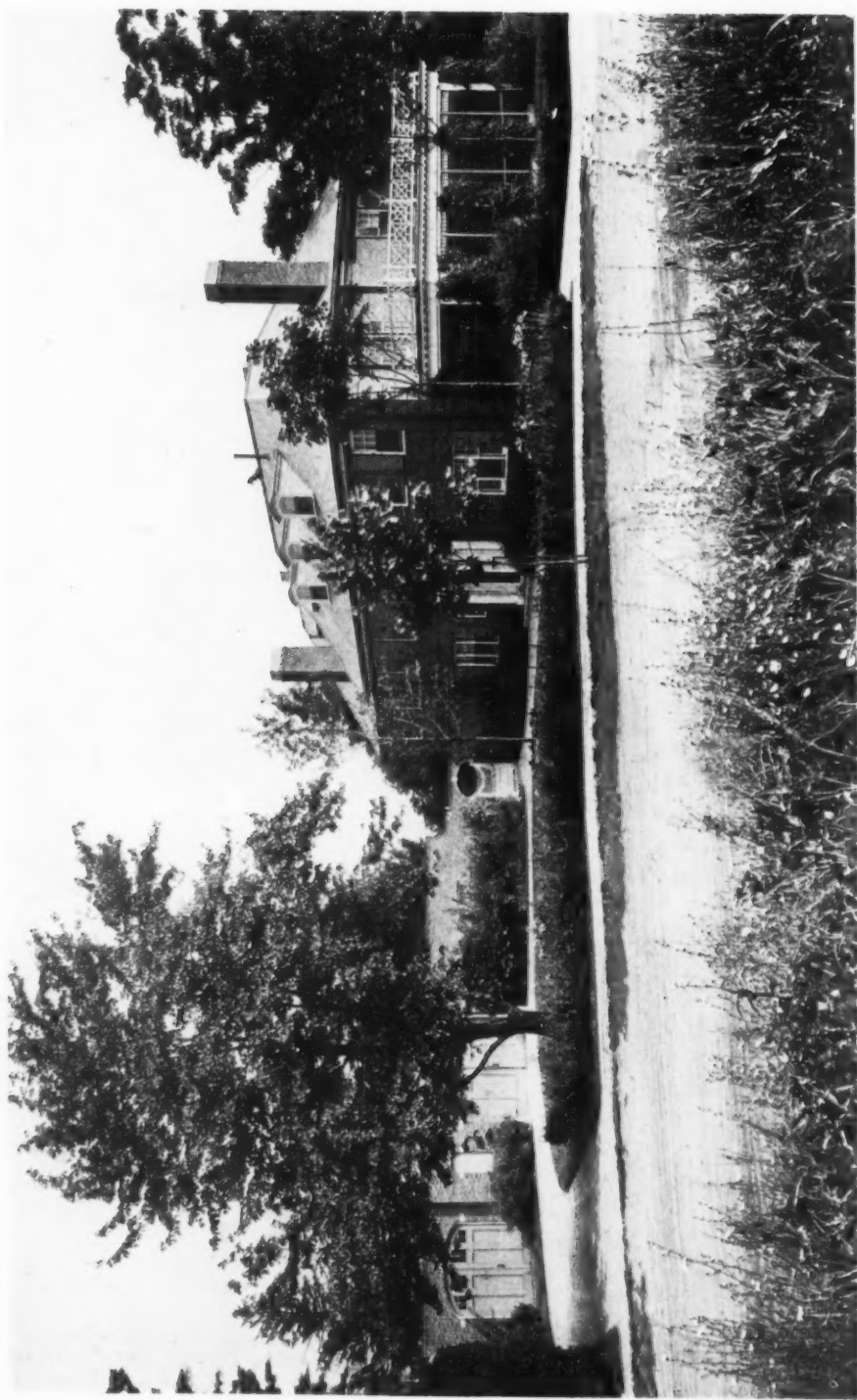
THE PONTIAC, OSWEGO, N. Y.
GEO. B. POST & SONS, ARCHITECTS.



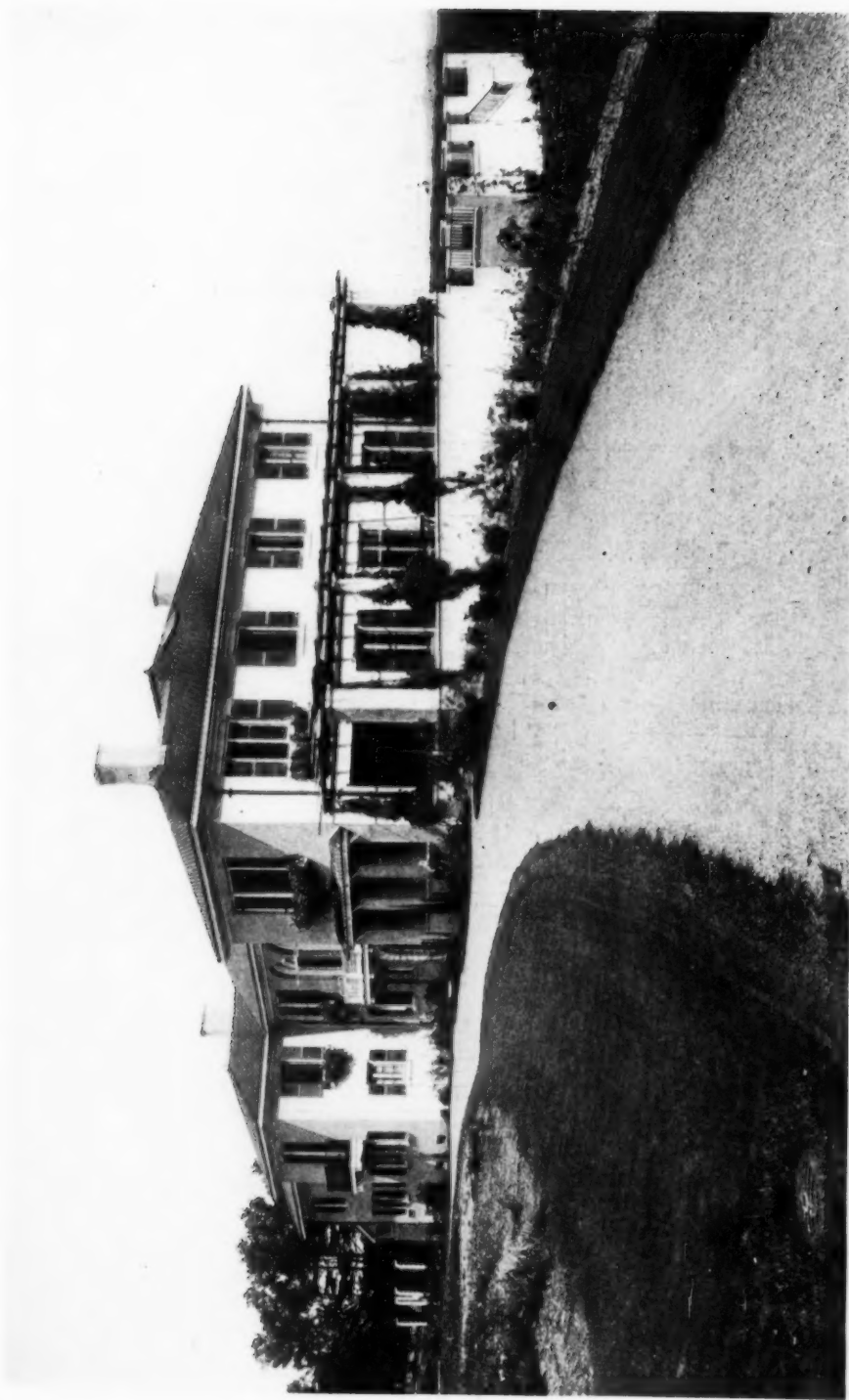
RESIDENCE OF CLARENCE V. BURRAGE, ESQ., WAL-
POLE, MASS. KILHAM & HOPKINS, ARCHITECTS.



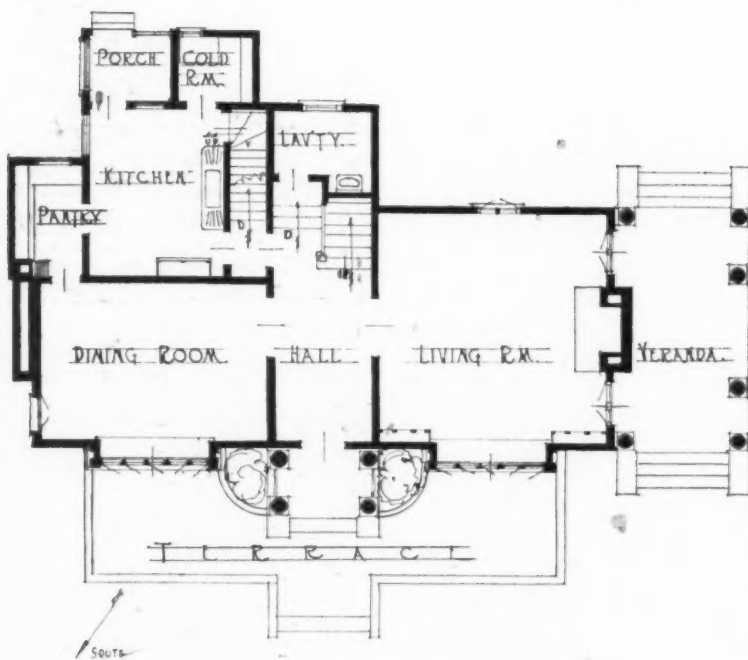
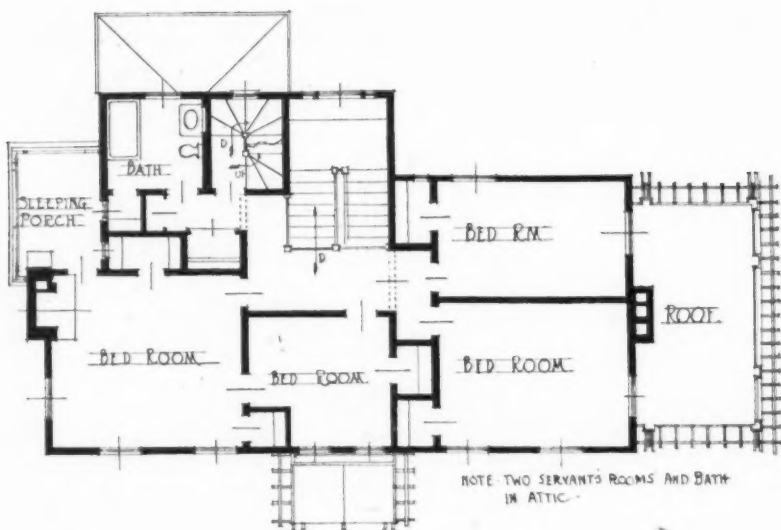
RESIDENCE OF CLARENCE V. BURRAGE, ESQ., WAL-
POLE, MASS. KILHAM & HOPKINS, ARCHITECTS.



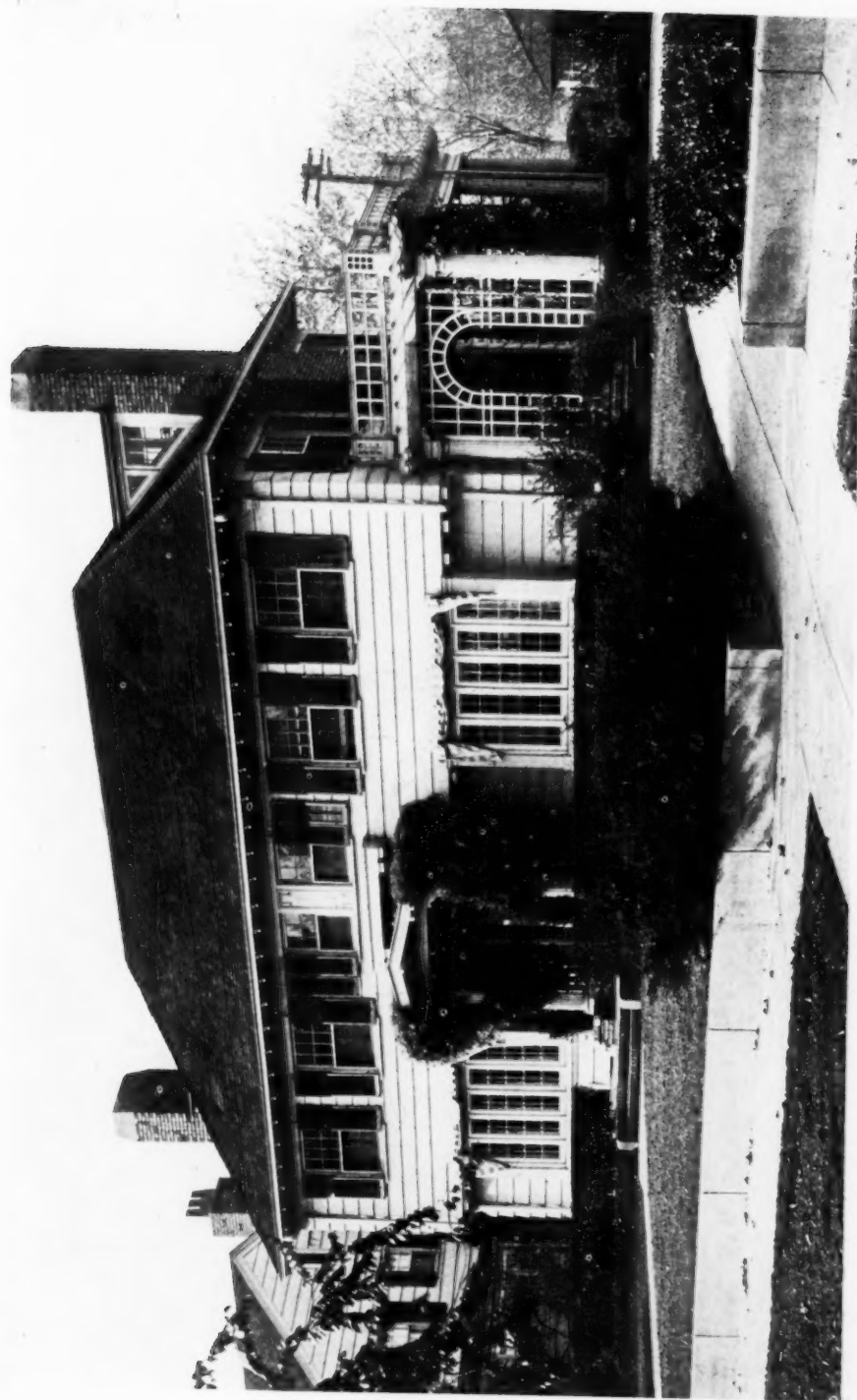
RESIDENCE AND GARAGE OF WILLIAM
H. MARLAND, ESQ., BROOKLINE, MASS.
KILHAM & HOPKINS, ARCHITECTS.



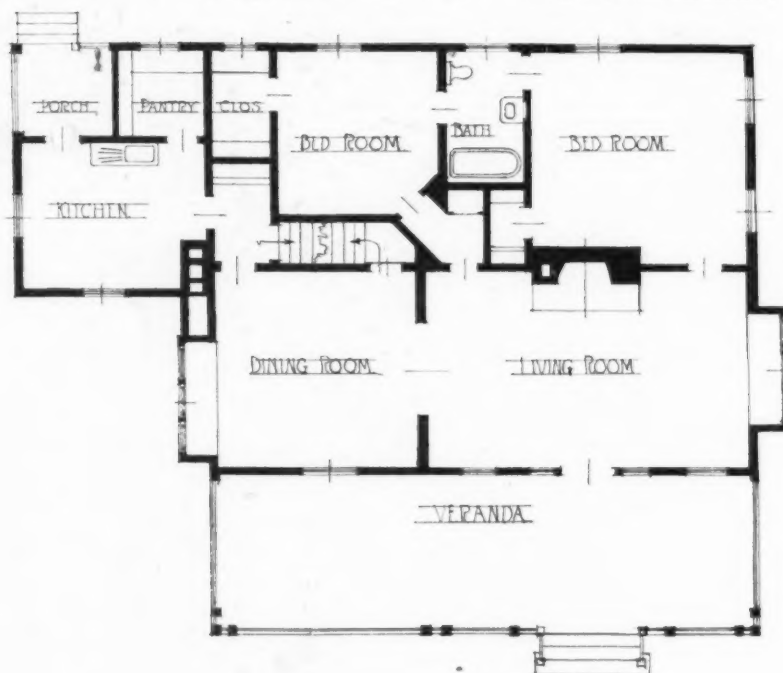
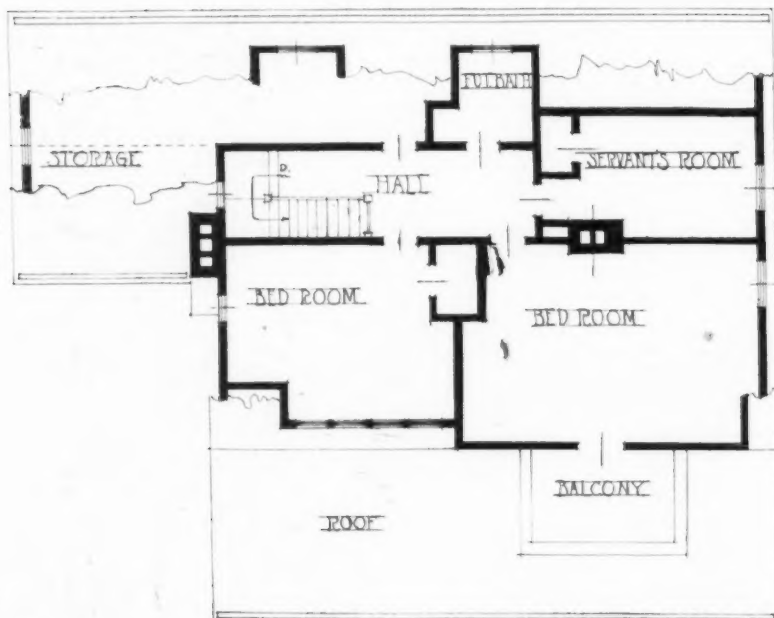
RESIDENCE OF THE REV. WILLIAM M. CRANE, RICH-
MOND, MASS. KILHAM & HOPKINS, ARCHITECTS.



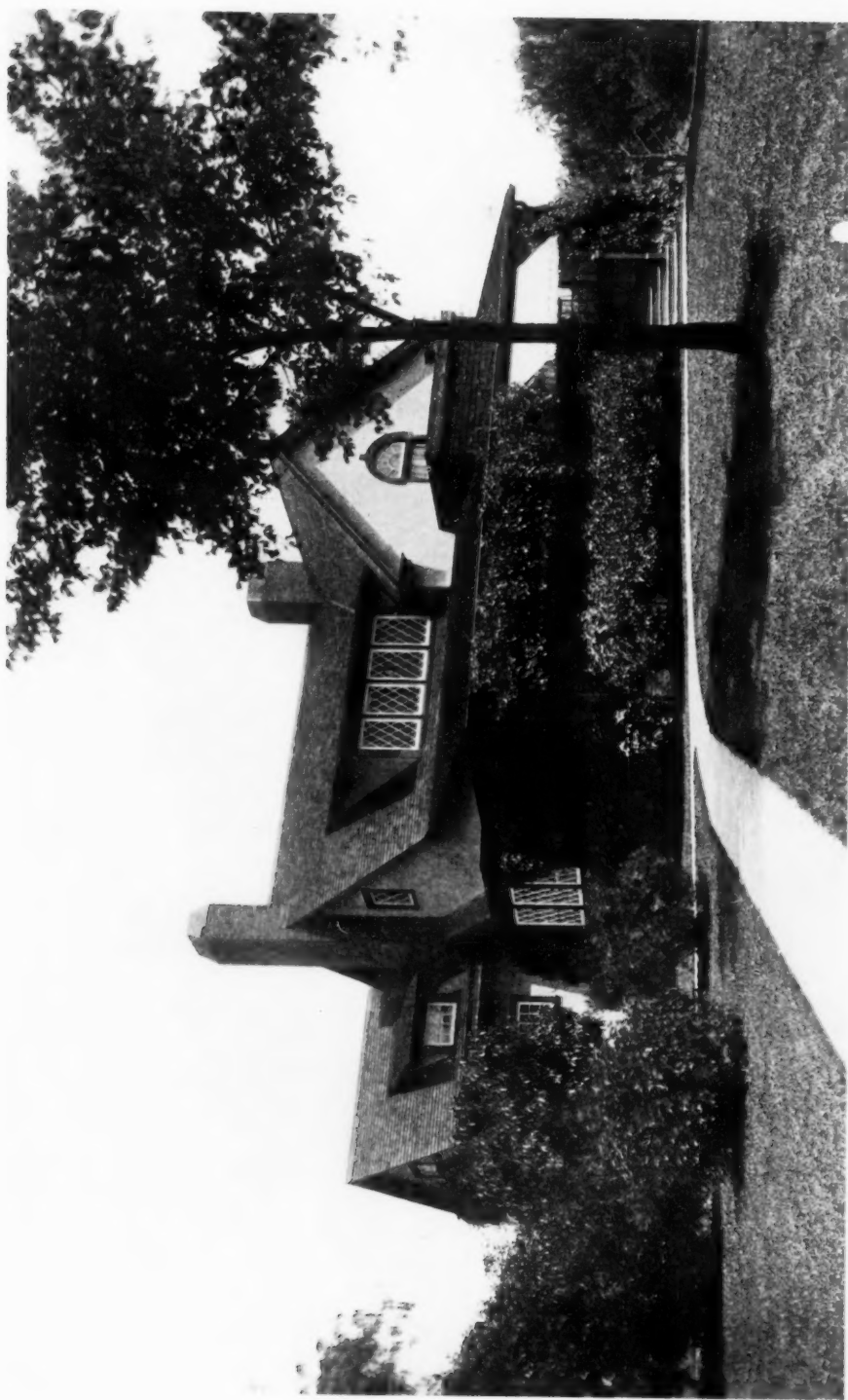
FLOOR PLANS—HOUSE OF HERBERT
E. HEWITT, ESQ., PEORIA, ILL.
HEWITT & EMERSON, ARCHITECTS.



HOUSE OF HERBERT E. HEWITT, ESQ., PEORIA,
ILL. HEWITT & EMERSON, ARCHITECTS.



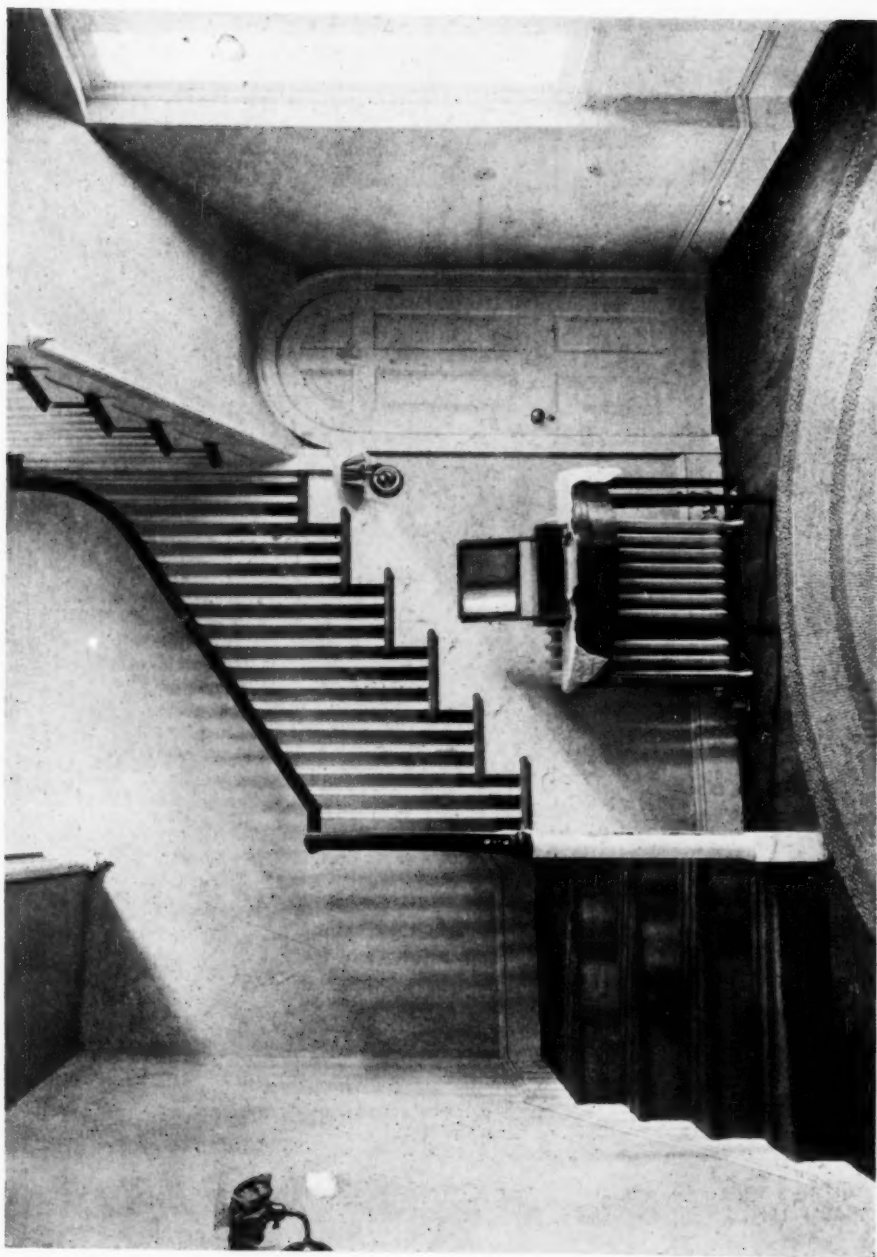
FLOOR PLANS—COTTAGE OF C. V.
MILES, ESQ., WASHINGTON, ILL.
HEWITT & EMERSON, ARCHITECTS.



COTTAGE OF C. V. MILES, ESQ., WASHINGTON, ILL. HEWITT & EMERSON, ARCHITECTS.



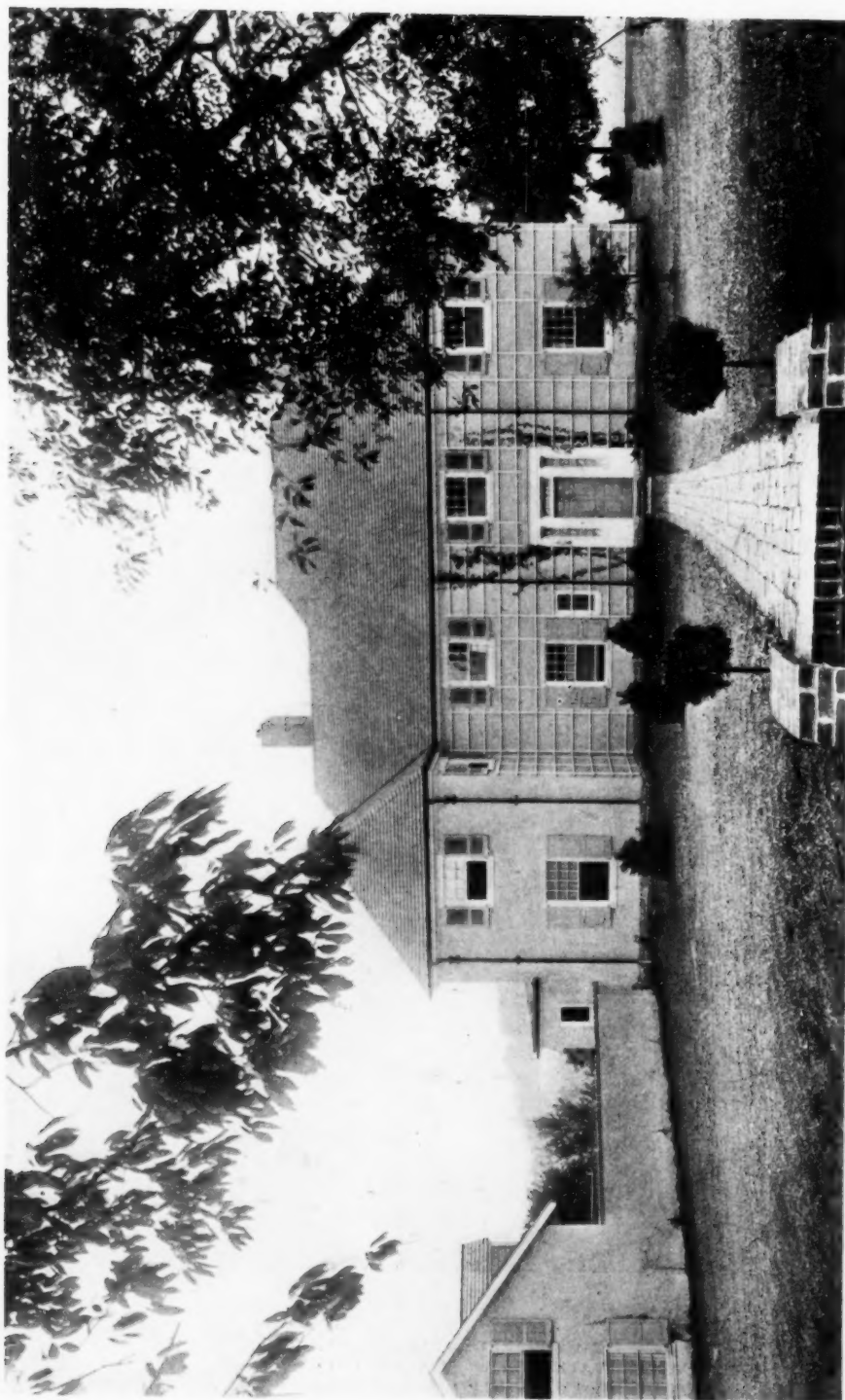
SMALL MORNING ROOM—HOUSE OF MRS. CHARLES PLATT,
JR., LAVEROCK, WHITEMARSH VALLEY, PA. JOSEPH
PATTERSON SIMS, OF FURNESS, EVANS & CO., ARCHITECT.



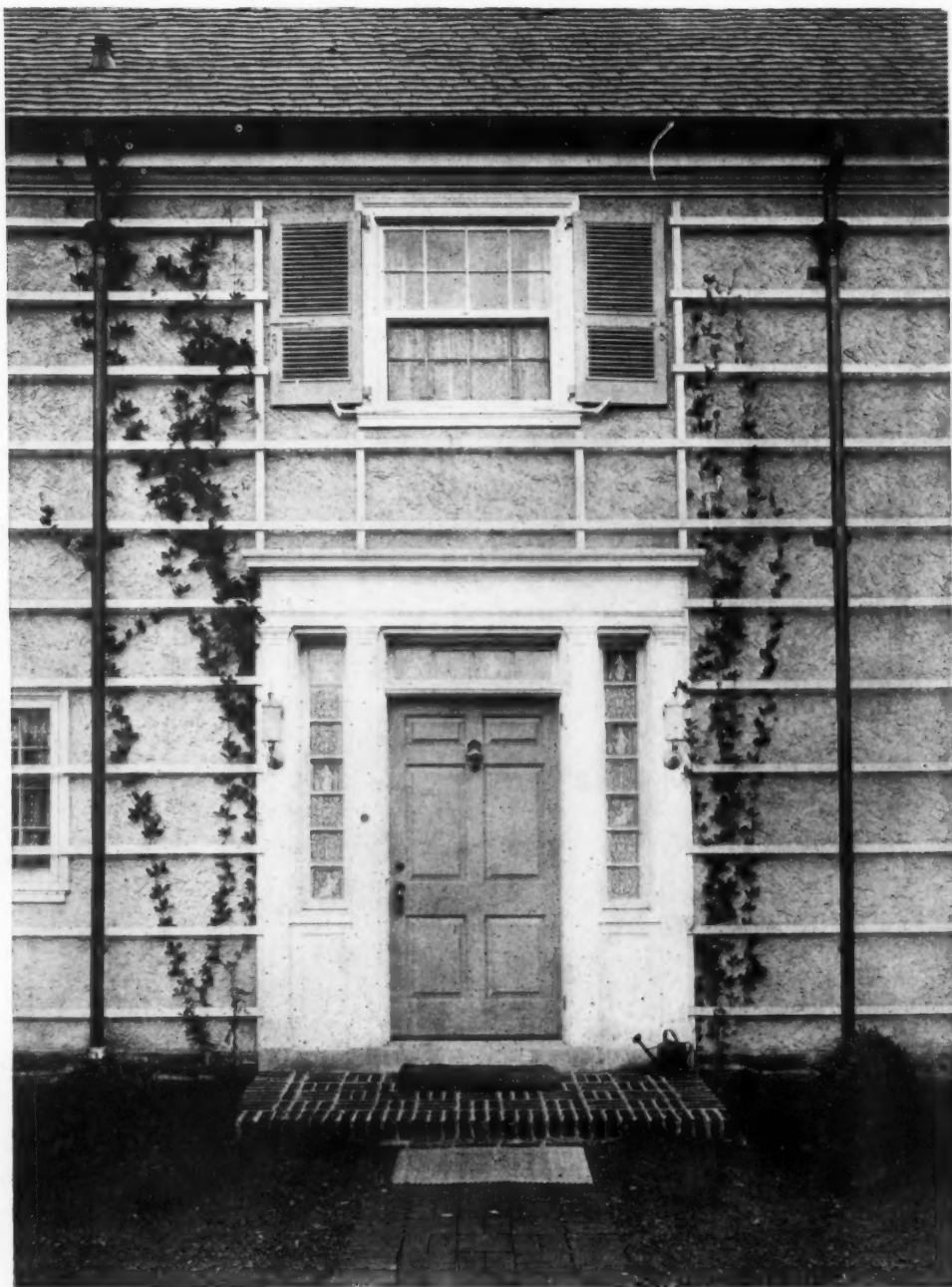
STAIRCASE-HOUSE OF MRS. CHARLES PLATT, JR.,
LAVEROCK, WHITEMARSH VALLEY, PA. JOSEPH PAT-
TERSON SIMS, OF FURNESS, EVANS & CO., ARCHITECT.



LIVING ROOM-HOUSE OF MRS. CHARLES PLATT, JR.,
LAVEROCK, WHITEMARSH VALLEY, PA. JOSEPH PAT-
TERSON SIMS, OF FURNESS, EVANS & CO., ARCHITECT.



NORTHEAST FRONT—HOUSE OF MRS. CHARLES PLATT, JR.,
LAVEROCK, WHITEMARSH VALLEY, PA. JOSEPH PAT-
TERSON SIMS, OF FURNESS, EVANS & CO., ARCHITECT.



ENTRANCE—HOUSE OF MRS. CHARLES PLATT, JR.,
LAVEROCK, WHITEMARSH VALLEY, PA. JOSEPH PAT-
TERSON SIMS, OF FURNESS, EVANS & CO., ARCHITECT.

AN OASIS IN THE BRONX

By MONTGOMERY SCHUYLER

THERE is no more depressing sight to the sensitive and humane observer, even within the confines of Greater New York, than what such an observer sees from the elevated railroad still called the Third Avenue, from the Harlem River until nearly the ending of the road at Bronx Park. Certainly there is no such deplorable stretch of building elsewhere in what we call "the Borough of the Bronx" and ought rather to call Bronxborough, if you insist on spelling it with an "x," though Bronck's Borough it really and historically is. When Jonas Bronck, the pioneer, settled in 1639 upon the banks of the stream that bears a distortion of his name, he could have had as little suspicion that, less than two centuries later, the river would become Rodman Drake's "own romantic Bronx," as that, less than three centuries later, the region named after him would hold something like a hundred times as many white people as in his time there were in all North America. An inaccurate official who endorsed a map of Bronck's holding, now in the New York State Library, unless it was burnt up last winter (1911), "a plot of Bronck his land," is probably responsible for the distortion.

The architecture of the part of the Bronx with which we are engaged is really dreadful. It is all residential or commercial, rather residential and commercial, the stores being under the houses. It is, in fact, simply an extension of the tenement house district of Manhattan. So we cannot expect much of its architecture. We cannot expect that the stream should rise higher than its source, or that the tenement house district of the Bronx should be better than that of Manhattan. What we might reasonably expect is to find it no worse, and in fact it is very much worse. We have also sadly to own that it is worse because it is newer. This is to say that our tenement house architecture is upon the whole deteriorating, in spite of the fact that some of the "new law" tenement houses in Manhattan

are positively attractive and show a great advance upon their predecessors. But there are in Manhattan whole blocks, though oftener single houses, if one can call tenement houses so, which are of an atrocious vulgarity. They do not characterize the tenement house district of Manhattan simply because that district is for the most part already built up with the old fashioned plain, cheap, red brick tenement houses. Certainly nobody would think of calling these attractive. But on the other hand they are not repulsive. The cheapest and simplest form of shelter, even though devised by a dull person, cannot become repulsive until it makes a false pretence of becoming attractive. Now, the only false pretence of this kind made in the old fashioned brick tenement house is the projecting cornice of sheet metal. That gives a touch of vulgarity, doubtless, to a class of buildings which would otherwise enjoy the comparative felicity of going unnoticed. And indeed we are so hardened to the tin cornice on the old fashioned tenement house that we hardly notice it, so long as it is confined to the old fashioned patterns. All the better, doubtless, for our comfort, but all the worse for our sensibility. The tin cornice

hardens a' within
And petrifies the feeling.

What an enormous gain to our street architecture if the thing, which is manifestly useless and undeniably dangerous, could only be abolished by law, or municipal regulation, as it is in more civilized cities!

But the old fashioned tenement house rises into respectability, the common Bowery lodging house into dignity, when it is compared with these latest products of the speculative tenement house builder. If you do not believe it, take a Third Avenue train at City Hall, or still better at South Ferry, and go north. As you go, note how, with every mile there is a falling off in common architectural decency. It is not only that there are



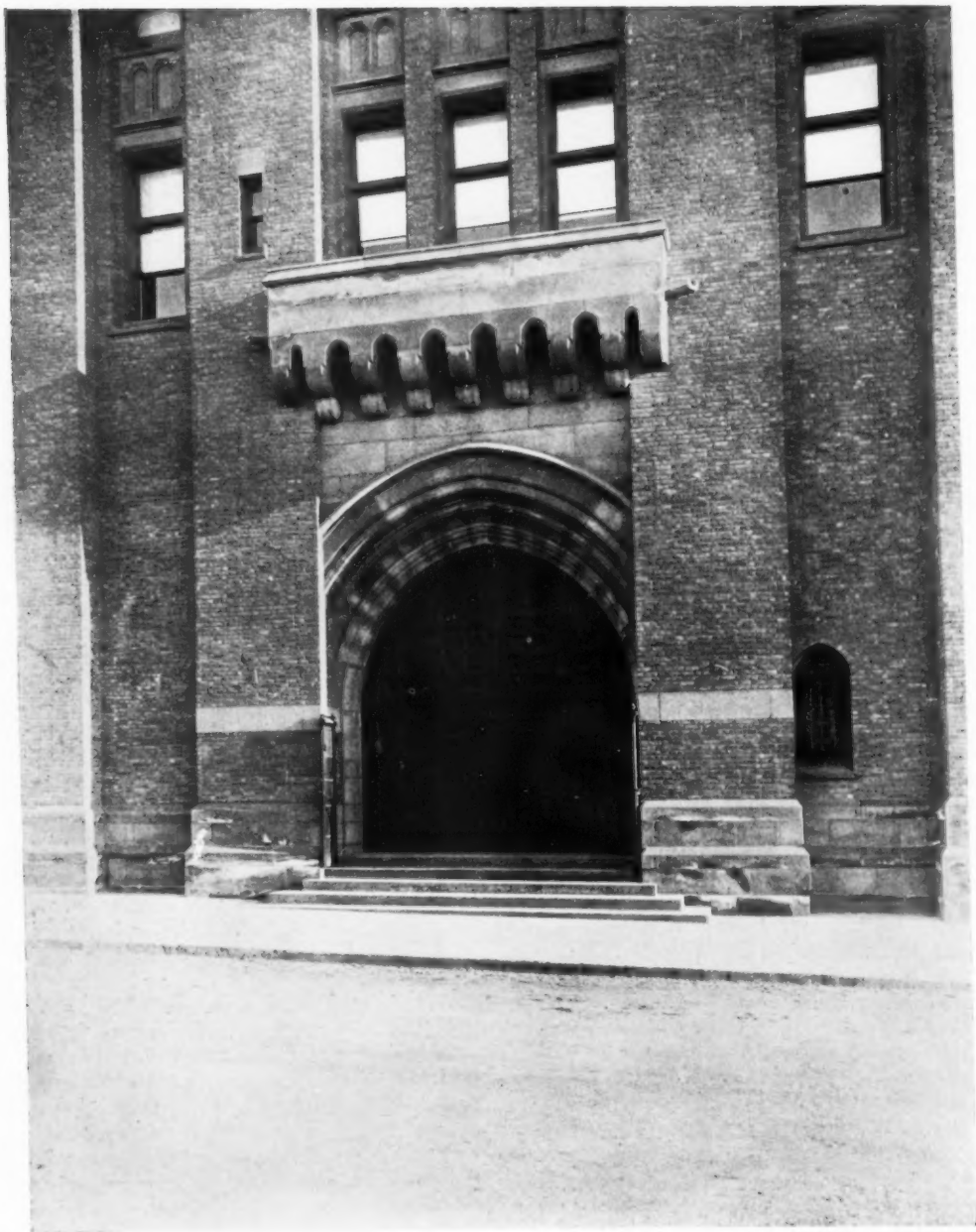
ARMORY OF BATTERY A OF THE FIRST BATTALION OF ARTILLERY, N. G. S. N. Y., NEW YORK CITY. CHARLES C. HAIGHT, ARCHITECT.

really good and interesting buildings in the Bowery and lower Third Avenue, and that the breed of them dies out as you go northward. It is that, after you cross the Harlem, it is forced upon you that the atrocities which are the exceptions in Manhattan are the rule in the Bronx, and that to the rule there are, you may say, no exceptions. It is the variegation of different bricks against the decent monotony of red brick. It is the increasing bloat of the "trim," the more outrageous and umbrageous protrusion of the tin cornice, which sometimes flowers into a nightmare in sheet metal. Instead of unostentatiously answering their purpose, these blocks and miles of tenement houses yell at you to notice them. The only inoffensive works of man in sight are the backs of the tenement houses. These are mere fields of common brick with windows cut where they are needed and reduced to an even simpler expression than the comparatively respectable tenement houses of the Manhattan of a generation ago, having no pretence of a cornice, no "trim," not even lintels, for the openings are covered with a segmental arch half a brick thick, with just enough rise for stability. But how good the bald backs look in comparison with the fronts! And to think that the fronts might look as well and cost as little, for, cheap as the cheap finery may be, it still costs something. But the proud and misguided owner and builder looks with complacency on his awful front and tells you it is "up to date." So it is. To the shame and loss of the present generation, so it is.

We say there are no exceptions to the terrible rule. It is curious how few the exceptions are, either from the rule that the building of the region is confined to stores and houses, or to the rule that it is of an atrocious vulgarity. There are occasional breweries, occasional ice-houses. There is hardly ever an occasional church, and one of the two churches one recalls along the route is neither here nor there, while the other is quite in the worst style of the tenement houses. There are two public buildings. One is the Borough Hall, which is so admirably placed, at least for the view from the railroad, that it is a pity it should not be

more worthy of its eminence. It is not so bad in design, having at least a composition, with a triple lateral and vertical division, though by no means worth discussing, even as a design. But the superstructure is of brick painted yellow, for the purpose, one suspects, of giving a job to a favored painter, and the favored painter has done his job so badly that his paint is turning green and scaling off, and giving itself away as paint, besides imparting to the front a shabbiness which is not in the least of a shabby respectability.

Of the other public buildings, the Bronx Court House, it is difficult to speak with patience. It is most absurdly placed, jammed up against the elevated tracks, with no room to provide any foreground or detachment for it, even if it were worth looking at, and were designed with a decent respect to its purpose and its environment. But neither the architect, quite unknown to this writer, nor the architecture are of the expressional kind. The architect has simply adopted an ideal form, the full size of the lot, within which the necessary apartments will be stuffed as they may go with no indication of them on the outside, unless the row of two-story openings running all around the building is to be taken as such an indication, which is of course absurd. There is nowhere in mass or in detail a single happy thought, a single form or feature which can be called the vestige of an architectural idea. And the sad thing is the awful waste. For this ill-placed, ill-designed and altogether absurd edifice is of monumental granite, of the most massive construction, and too plainly has cost an enormous deal of public money, without the possibility of giving pleasure to any human being. What is it Kipling says about the Mormon Temple at Salt Lake:—"The flatness and meanness of the thing almost makes you weep, when you look at the magnificent granite in blocks strewn abroad." It is not worth while giving a photograph of the melancholy object, for, while the photograph would show it as a loud and costly platitude in granite, it could not show the entire absurdity of it with reference to its surroundings.



ENTRANCE—ARMORY OF BATTERY A OF THE FIRST
BATTALION OF ARTILLERY, N. G. S. N. Y., NEW
YORK CITY. CHARLES C. HAIGHT, ARCHITECT.

One exception there is to the general badness of the building of the Bronx which it were ungrateful to pass over. The school houses are the chief means of assimilating the heterogeneous population which has poured into the borough within the last two decades, and for which these terrible living accommodations are provided. And the school houses are numerous, capacious, and admirably designed, as we have learned these many years to expect from the architect of the Board of Education. Here, if here only, we can honestly hail an advance in the new tenement house district, upon the building of the old. Even here the old school house, though doubtless very stupid, was no worse than stupid. The new school house, as we all know, is positively attractive and in itself a means of education.

It is plain enough to the observer whose occasions take him along the route of the elevated road, that nowhere on earth is there more need of an architectural evangelist whose work shall show that architecture is not a matter of "variety" of unstudied forms, nor yet of the sumptuousness and costliness of material, much less of the false pretence of those qualities, but of the faithful and artistic expression of the structure, and that this may be done in the humblest material as well as in the richest or an imitation of the richest, that even the material of the unpretending brick backs of the Bronx tenement houses may be so compiled as to put the pretentious fronts of those eminences to open shame, and that the substitution of unpretentiousness for pretence ought to be the aim of the future builders of the Bronx. Most fortunately, exactly such a demonstration is one of the most conspicuous objects in the borough. This is the new armory of "Battery A" of the First Battalion of Artillery, N. G. S. N. Y. It is very commandingly placed, upon an elevation which makes it fairly visible from the station of that elevated road which conditions all the building and all the life of this part of the Bronx. No Bronx burgher can help taking notice of it and being impressed by it. Neither can he help being struck by the contrast which

it presents to the current building of the neighborhood. The contrast ought to excite reflection in the mind of the speculative builder himself.

The dimensions of the building would alone suffice to make it conspicuous. A building 200 by 300 in area is so unusual in any part of Greater New York as to be sure of attracting attention. These dimensions are necessitated by the purpose of providing a drill room for a field battery. The apartment which serves this purpose is said to be the largest riding hall on the west side of the East River, though it seems that there is one in Brooklyn even bigger. It comprises in effect the entire building, for a narrow fringe of rooms along the west side is strictly subordinate to the riding hall, as are the stables which occupy the basement. A flanking wall of 300 feet in extent cannot fail of making an impression, whatever its treatment, or even if it received no more treatment than the backs of the tenement houses which are so much the most favorable of their aspects. But a quite blank wall of this extent and with no more artistic treatment than is given to those backs, would have an aspect not only of monotony but of weakness. The bald backs, in spite of their so much lesser expanse, look painfully weak because they are so painfully thin. Either a sufficient thickness of wall for stability must be shown in the openings, or else the wall must be reinforced at intervals in order to reassure the eye. Here both devices have been invoked. The walls have visibly sufficient depth, a depth which becomes most impressive and powerful where, as in the arched entrances, the whole thickness of the wall can be, to use the happy technicality of the builders, "revealed." Moreover, there are three pairs of massive buttresses at intervals, and, knowing or conjecturing that the interior is one great apartment without intermediate supports, one assigns these buttresses as the abutments of the huge roof trusses necessary for such a span. Not only is the stability of the long wall put far beyond doubt by these devices, but the brute expanse becomes an ordered mass, an architectural design. For note that these features have

nothing capricious or arbitrary, but are organic and essential, and proceed from the structural necessities of the case. Hence, in material no more rare or precious than the bald backs, being common brick, though apparently chosen for color, and at any rate very lucky in its color—in common brick laid with wide red joints, and relieved in the right places, which is to say the necessary places, the arches of openings, the sill courses of windows, the offsets of buttresses, and the base of the wall, by a sparing introduction of brownstone—the whole arrangement is expressive, rational, significant. Besides the buttresses which guarantee it against outward thrust, the wall is most effectively framed between the terminal masses, the huge square tower at the corner, and the small tower at the other extremity. The intervals between the two buttresses of each pair are occupied with features consisting of four tiers of triple openings surmounted by a relieving arch and a crenellated parapet.

The front, though a hundred feet shorter than the flank, is of a goodly and ample latitude. It is divided between the terminal towers, the outer, as in the flank, much smaller than the huge square mass at the corner to which the whole composition converges and pyramidizes, having a curtain wall withdrawn from the towers at one end by six feet and at the other by eight, and a central feature of some seventy feet wide. This is signalized by what one cannot call a gable, being a series of crenellated serrations of the skyline, rising towards the centre, and

indicating the large and low curve of the actual roof. At the bottom of this central portion is a pair of modest doorways, quite out of competition with the depth and power of the flanking and terminal archways. The detail of one of these archways, that at the inner end of the flank, shows the vigor and weight of the modeling, the effectiveness of the archivolts dying into the impost, the effective framing supplied by the buttresses, and the massiveness of the corbelled balcony. The suggestions of "military Gothic" are not overdone, as they are so apt to be in similar erections. They are confined to the crenellations of the parapets and of the centre of the south front, and to the corbelling of the balcony over the archway of the side, a corbelling which might be, though it is not, accompanied with a machicolation in the manner of the mediaeval fortification. These touches of tradition, denoting the purpose of the building are perfectly compatible with the fact that the detail throughout is simply straightforward structural modeling which might have taken the same forms if the designer had never heard of a Gothic castle, and is the logical expression of the materials and the construction employed. The photographs show how admirably consistent, restrained, and effective the architecture of the armory is, and what an effect it produces with the utmost simplicity and unpretendingness of material. But to know how very profitable it is for reproof and for instruction in righteousness, you must see it amid its awful surroundings.

An English Study of the Palais De Justice, Brussels

By Max Judge

Drawing by W. Walcot

IN all forms of art there will always be found examples which the critic must explain irrespective of common tendencies—realizations of the mind which cannot be assigned to any definite position along a recognized line of development. The tendency represented by such a line may suddenly encounter an abrupt break by the creation of a form entirely unsuspected in antecedent thought, in which there has been a reversion, in a kind of atavism, to far earlier forms for inspiration—forms that have not handed down their influence.

In architecture we have a striking example of this in the Palais de Justice at Brussels; to understand such a building we must endeavor to consider it outside the criticism that an unbroken line of architectural tradition has evolved. Hardly any other building, certainly none other of modern times, or Western (as opposed to Eastern) origin, calls so imperatively for a subjective interpretation, isolated as it is from our architectural thought. Such an isolation suggests, in fact, the necessity of translating this idea of architecture into a form of art where we might understand it, where its architectural being might become a reality to be reasoned with. Till then it remains something for conjecture; till then it must fail to adjust itself to our accepted notions of what architecture is, and it is equally impossible to adjust all that the mind has accepted as representative and distinctive, to embrace such a creation. The great examples of architecture are the most easily explained and understood, because they have been evolved from direct tendencies. St. Paul's Cathedral, for instance, does not stand on the borderland of any unexplored field of thought, but is the culmination of an unbroken architectural development. It embodies

no architectural phenomena that we are not in a position to appreciate, nothing which English architectural criticism is not able to explain. That is why we understand it, and why we fail to understand the Palais de Justice, because there our criticism fails us. Joseph Polaert takes us back with a shock, across a vast, unrealized gap, to the possibilities of Mesopotamian building, possibilities never hardly more than dimly guessed from what we have known of such an architecture. Had the ruins of some such building as the Palais de Justice been discovered on the Assyrian plain, we should have experienced nothing more than a reasonable surprise at so much further evidence of the stupendous character of the works of these mighty builders of the past. But it is far different to find an actual creation of this very nature entering into the scheme of our own civilization, and to proceed to the appreciation of the intrinsic merit of so marked a deviation from established ideas. It is not merely a question of style, and the formation of a new style, but rather a different understanding of what architecture can attempt.

To take as a motif a building the beauty and interest of which lie for us in its unique character, outside our own architectural sphere—a building, say, like the Táj Mehál—must seriously affect the architectural tradition of a nation; and in a measure the Palais de Justice, based as it seems to be on some lost masterpiece of Assyria, must be regarded as violating an essential canon, and in so doing as achieving a daring that is denied greater works—greater, that is, in so far as they conform to what is accepted as right.

This line of thought has been prompted by a dimly recalled impression of one's actual first view of the structure, and by

the personality of the building conveyed by Mr. W. Walcot in a composition which seems to ignore deliberately all that other buildings may express. The artist has been concerned with the Palais de Justice, and that only, absorbed by his subject as a portrait painter might be, and he actually achieves for us, as far as is possible, that translation from sphere to sphere which we have tried to indicate as essential to the proper understanding of the building. He succeeds in so far as we are led to forget architecture as such, and so on to indefinite musings called up out of the past by vague expressions of still vaguer things. The emotions aroused by architecture are due to tangled associations of time and place: the Palais de Justice seems to suggest an intangible affinity with something beyond our dimensions. There is some quality in Mr. Walcot's drawing commensurate with the scale of the building; the minute treatment of the base, for instance, tends to reproduce something of the sensation actually experienced by the eye in its futile attempt to take in comprehensively an overwhelming height, an attempt that dissolves into an Assyrian, Babylonian, echo in which awe and antipathy never quite cease from conflict.

Photographs seldom prepare one for the actual effect produced by a building; the first impression of the Palais de Justice is one of numbness, as though one has been confronted with some unmeasurable object beyond the sphere of one's emotions, some unknown vastness suddenly known. How correlate that to our conscious appreciation of an architecture which has never seemed to be beyond us, or anything but a part of our ideas!

The architecture achieved here, whatever it be, is such as to remove it from all else; it must ever fail to come into relation with its surroundings, or to express the inherent nature of a city. It is an estranged building, which can never exercise that tutelary genius over the Rue de la Régence, the Rue des Minimes, or the Place Polaert, which the precincts of St. Paul's owe to Wren's genius. And it is not to be expected that sentiments akin to those we feel for St. Paul's are to be evoked by this stupendous achieve-

ment of Polaert's. Has any other European capital a building so estranged? Of the Palais de Justice a French critic has written illuminatingly: "It rises above the town, its gigantic masses piled up to the height of one of the hills with which the soil of Brussels is studded, and, seen from the surrounding country, appears as the advance guard of some city of Babylon. In fact, it dominates the panorama so completely that one sees nothing but it at a certain distance, and the houses which unfold themselves at its feet diminish to such an extent as to become nothing more than the dwellings of a simple, straggling, market town. . . . The Palais de Justice, indeed, whether it be studied at a distance, across the rain-charged mists, or under brilliant sunshine, or whether one examines it closely, forms, with its titan-like entablature surmounted by pillars, hollowed with porticoes, notched with staircases, an architecture one might believe to have been revealed in the clouds of an apotheosis."

Of a building of this nature mere dimensions tell us little. From the low-level pavement on the northwest the summit of the dome rises some thirty feet higher than the top of the cross on St. Paul's, but the effect is of an even much greater height. The superimposed platforms fail the eye, which has to carry depths, gauge heights, jump receding planes, in such bewildering complexity that by the time it arrives at the four colossal statues that brood over the city around the final colonnade below the dome, it is out of focus.

The drawing to which this study must be considered as commentary shows us the great entrance portico, on the axis of the Rue de la Régence. Looking up this thoroughfare from the Place Rogale to Place Polaert in front of the entrance portico, one gets the most easily negotiable and yet the most remarkable view of the building. But it seems actually no nearer to one's understanding than the distant mark it sets over Brussels from the Lion Mound at Waterloo.

The portico is sixty-six feet wide and 114 feet high; the colonnades on either side are three columns deep, set with great staircases. Within the portico a



PALAIS DE JUSTICE, BRUSSELS.
DRAWING BY W. WALCOT.

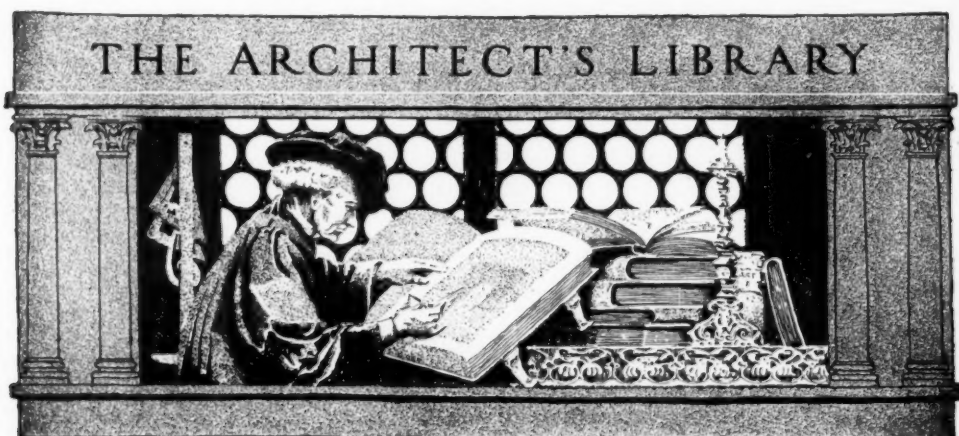
great bronze door opens on a large vestibule which leads directly to the Salle des Pas-Perdus, the most remarkable feature of the plan, and of which its rather fantastic nomenclature tells us much more than could mere figures. Suffice it to say that there is an area something like 300 feet long and 130 feet wide, and above us 300 feet of space below the great dome. From the upper floor all this appears still more formidable; one gazes into vacuity.

Ignoring some detail, it is not necessary to do more than refer to ancient Assyria for the prototype of the Palais de Justice; but when we come to contrast different conditions, certain criticisms become inevitable. We have a building in which portico and colonnade seem to alternate, and in which at every fresh superimposition there is a fresh opportunity for deep shadow. Shadow is distributed throughout the whole building, as if it had been the architect's motif. Such a motif could well find expression on a southern plain, in a building exposed to a relentless glare, in the deep recessed porch and narrow window opening. It is perhaps hardly realized at times how small an opening will suffice to light an interior if there be brilliant sunlight. Southern buildings need verily to be "stopped down" like the lens of a camera under conditions of intense light, and it is hardly possible to provide too much shade. But how different such a tendency becomes in the north! In that apotheosis suggested in the quotation given above it might be assumed that the building were but duly protected from the light of all the heavens; but coming down to earth, to the not over-relieved greyness of the Belgian capital, we are forced to the conclusion that the interior is seriously over-darkened—an architectural sacrifice in which expressions lose their true meaning and point to a bad architectural economy.

It is hardly to be wondered at that the architect did not live to see his conception completed; the wonder is that it should ever have been completed. The building was commenced in 1866 and was inaugurated in 1883. Polaert died in 1879 at the age of 62. His other work in Brussels includes the Colonne de

Congrès, the Church of Sainte Catherine and the Théâtre Royal de la Monnaie, but we cannot point to any work of his that can be said to give any suggestion of what his genius was eventually to evolve.

In the projection and completion of an enterprise like the Palais de Justice there is food for much comment, and it is impossible to ignore the influence of the late King Leopold in this connection. Some profess to see in the building the personification of an autocrat, a symbol of oppression; certainly it is easy to perceive the expression of a will that would recognize no obstacle to the fulfilment of a thing once instigated. And it is just as certain that without such a power behind him no architect could ever hope to succeed in so gigantic a project. No mere government could stand him in the same need. The King's approval of the plans was not only sufficient to carry the building through its preliminary stages, but was a guarantee that those plans would be completed; no one perhaps realized to the full all that Polaert had conceived, and the building must have assumed a more and more stupendous character to those who had to find the enormous sums which it swallowed up. The more colossal in its development the edifice that was dawning upon them, the more inevitable was the expenditure. Polaert had opportunities of realizing his ambition that have been granted to few in modern times, and the result is that Brussels is possessed of an edifice which easily eclipses anything now standing. It is a lasting monument to the genius of its architect, but it is something more. Whatever its position as architecture may come to be estimated at, it will represent an horizon reflecting the largeness of spirit, the grasp of big things, which characterized King Leopold. Great architecture, great art in any form, calls for not only great artists but great rulers, and there is a scale of mind that is explained or misunderstood according as we make or do not make allowances for tendencies, which, in the case of anything petty or mean, would be adjudged, and rightly so, as distortions and shortcomings. Without her emperors the grandeur and scale of Rome were not.



BOOKS ON COLONIAL ARCHITECTURE

By RICHARD FRANZ BACH

Curator, School of Architecture, Columbia University

Part IV.—The Minor Arts (Continued)

WE cannot too highly commend Mr. Frederick William Hunter's book on *Stiegel Glass* (imperial octavo; pp. xvi+272, with 12 plates in color from autochromes by J. B. Kerfoot, and with 159 halftones. New York; Houghton, Mifflin and Company; 1914. \$10). This is in our estimation a praiseworthy example of the unstinting thoroughness and care which should characterize all studies in the Colonial field. Mr. Hunter has selected for his researches a field burdened with controversy, uncertainty and limiting tradition, and he has gathered together a vast store of facts about the eccentric glass designer whose name has as a result come to be identified with the whole span of the embryonic period of the glass industry in the United States. The author related in interesting fashion the facts concerning the whole career of Baron William Henry Stiegel, that "romantic figure, who in the old days rode post behind eight white horses across central Pennsylvania, with horns blowing and bands playing," his simple beginnings, his successes, his ultimate failure and im-

prisonment for debt, the founding of Manheim and the experiment of Wistarberg, both well known to students in this field, and in the end the apotheosis of "the Baron" in the minds and even in an annual festivity in the district in which he attained his fame. There is also detailed description of many works ascribed to Stiegel, a study of the general characteristics of his special type of workmanship, his materials and methods. To bring his study into intimate connection with the general field of glass making in this country, the author has added chapters on "Early Glass Making in America." The book is in a definite sense unique; nothing of like quality has yet appeared in the province of the minor arts of our early time. It is admirably illustrated, and a work of exemplary excellence in treatment throughout.

As we go to press, an excellent work by Harold Donaldson Eberlein and Abbott McClure, entitled *The Practical Book of Early American Arts and Crafts* (large octavo; pp. 339, ill. Philadelphia; The J. B. Lippincott Company; 1916.

\$6) comes to hand. This volume admirably maintains the standard set by other studies whose titles begin with the words "practical book" issued from time to time by these publishers and previously noticed in these columns. We recall *The Practical Book of Period Furniture* by the same authors and *The Practical Book of Garden Architecture* by Phebe Westcott Humphreys; in the same series have also been published C. Matlack Price's *Practical Book of Architecture* and Dr. G. Griffin Lewis' *Practical Book of Oriental Rugs*, while an additional volume by Eberlein and McClure, entitled *The Practical Book of Interior Decoration*, is in preparation. The whole series is characterized by thorough study and careful production, and each title in turn presents a distinct contribution to its selected field. All of these works have, as their names indicate, a predominantly practical viewpoint; they are not merely historical or critical but rather stylistically descriptive and analytical. The authors do not hesitate to introduce drawings, especially line drawings, where needed; and they are careful to spend adequate time over definitions, types of construction, characteristic motives, structural difficulties and expedients, and modes of manufacture.

It is to be fully expected that the author of *The Architecture of Colonial America* should be conversant with the details of our early architecture, and that, therefore, he should be able to place his minor arts in their original and true environment; repeatedly we are made aware in the pages of the present work of this broad knowledge of his field—from stone carving to silver spoons, from decorative copper work to hand block printed wall papers—gained by dint of painstaking research and continued delving among works and books. All of the early American arts and crafts are dealt with; glass, majolica, metal work in iron, brass, copper, lead and tin, decorative needlecraft, domestic and ecclesiastical silver, pewter, pottery, painting of household gear, decorative weaving, printing on fabrics and paper, wood work, stone carving, even early portraiture and allegorical painting, in the Colonies receive attention; and a special chapter on early

American lace, individually contributed by Mabel Foster Bainbridge, likewise forms an essential part of the discussion. All of these chapters are profusely illustrated both by separately inserted plates and by drawings and cuts in the text. Individual features of interest attract our attention at once; notably, by way of example, the list of old silversmiths, which includes their places of activity and wherever possible their trademarks; also the attention given to the arts of the needle, quilting, embroidering and lace making.

While, of course, so general a work cannot vie with volumes devoted to individual fields, such as John Henry Buck's excellent study of *Old Plate* noticed in preceding paragraphs, it does, on the other hand, offer the most complete comprehensive study of American crafts that has yet appeared. It is equaled by no other volume at present available. Although its context has been well covered, in word and picture alike, in the two works by Mr. William Alden Dyer already discussed, the workmanship of the volume as well as its typography and general character may be fairly said to be far in advance of that manifested in any general publication in its field issued to date; in fact, with the exception of an occasional work like Frederick William Hunter's *Stiegel Glass* it may be said to excel the majority of works devoted to individual arts and crafts. In the same sense that *The Practical Book of Period Furniture* by the same collaborators assumed at once a position of importance among works devoted to the mobiliary field, so also *The Practical Book of Early American Arts and Crafts* will be assured of similar attention at the hands of students, collectors and historians alike.

Above all, this volume serves well to portray the variety of design and type that characterized the work of the founders of the nation, how many changes they rang in a dozen media and in a round score of crafts, how well they knew the need for dignifying and making attractive for the eye as well as expedient for the hand the host of objects of mere utility that entered into their daily lives.

A BIBLIOGRAPHY OF THE LITERATURE OF COLONIAL ARCHITECTURE.

IV. Volumes Relating to the Minor Arts.*

1. General Works.

Dyer, Walter Alden. *Early American Craftsmen; Being a Series of Sketches of the Lives of the More Important Personalities in the Early Development of the Industrial Arts in America, together with Sundry Facts and Photographs of Interest and Value to the Collector of Americana.* Octavo pp. xv+387, with many ills.; bibliography, index. New York: The Century Company; 1915. \$2.40.

Dyer, Walter Alden. *The Lure of the Antique; Being a Ready Reference Book for Collectors of Old Furniture, China, Mirrors, Candlesticks, Silverware, Pewter, Glassware, Copper Utensils, Clocks and Other Household Furnishings of our American Forefathers, and a Handy Guide for the Determination of Age, Style, Maker, Genuineness and Value.* Octavo; pp. xii+499, with 159 photos. New York: The Century Company; 1910. \$2.40.

Eberlein, Harold Donaldson and McClure, Abbot. *The Practical Book of Early American Arts and Crafts, with a Chapter on Early Lace by Mabel Foster Bainbridge.* Large octavo; pp. 339, with numerous ills. Philadelphia: The J. B. Lippincott Company; 1916. \$6.00.

2. Glassware.

Barber, Edwin AtLee. *American Glassware, Old and New. A Sketch of the Glass Industry in the United States and Manual for Collectors, etc.* 12mo; pp. 112; ill. Philadelphia: Patterson and White Company; 1900. Out of print.

Hunter, Frederick William. *Stiegel Glass.* Imperial octavo pp. xvi+272, and 12 plates in color from autochromes by J. B. Kerfoot, and with 159 half-tones. Boston: Houghton, Mifflin Co.; 1914. \$10.

3. Metal.

American Silver; The Work of the Seventeenth and Eighteenth Century Silversmiths. Exhibited at the Museum of Fine Arts, Boston, June to November, 1906. Crown octavo; pp. 100 and 29 photographs. Boston: Museum of Fine Arts; 1906. Ed. by R. T. Haines Halsey. Out of print.

*Note: The references in this section, concerning the various minor arts, must necessarily remain incomplete, chiefly because of the somewhat popular character of many publications in this field.

American Church Silver of the Seventeenth and Eighteenth Centuries, with a Few Pieces of Domestic Plate, Exhibited at the Museum of Fine Arts, July to December, 1911. Octavo; pp. xxvii+163 and 38 plates. Boston: Museum of Fine Arts; 1911. Edited by John Henry Buck. \$5.

Buck, John Henry. *Old Plate, Ecclesiastical, Decorative and Domestic; Its Makers and Marks.* Crown octavo; pp. 327, ill. New York: The Gorham Manufacturing Company; 1903.

Curtis, George Munson. *Early Silver of Connecticut and Its Makers.* Octavo; pp. 115 and 38 plates. Meriden, Conn.; The International Silver Co.; 1913. \$1.25.

Curtis, George Munson. *Early Silversmiths of Connecticut.* Duodecimo; pp. 18. Meriden, Conn.; privately printed; 1903. Out of print.

Gale, Edwards J. *Pewter and the Amateur Collector.* Octavo; pp. xiv+97 and 43 plates. New York: Charles Scribner's Sons; 1909. \$2.50.

Goss, Eldridge Henry. *The Life of Colonel Paul Revere, with portraits, many ills., fac-similes, etc.* 2 vols.; octavo. Boston: J. G. Cupples; 1891. \$6.

Jones, E. Alfred. *The Old Silver of American Churches.* Folio, meas. 11 by 15 inches; pp. xxxvii+566 and 145 plates. Letchworth, Eng.; privately printed for the National Society of Colonial Dames of America; 1913. \$40.

Moore, Mrs. N. Hudson. *Old Pewter, Brass, Copper and Sheffield Plate.* Small octavo; pp. xiii+239, ill. New York: Frederick A. Stokes & Co.; 1905. \$2.15.

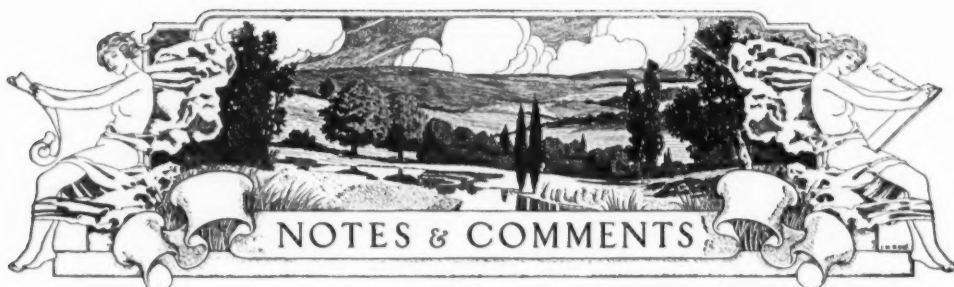
Nichols, Arthur Howard. *The Bells of Paul and Joseph W. Revere.* Octavo; pp. 40, ill. Boston, Mass.; 1911.

4. Pottery.

Barber, Edwin AtLee. *The Pottery and Porcelain of the United States. An historical review of American Ceramic Art from the earliest times to the present days.* Crown octavo; pp. xxi+539, ill. New York: G. P. Putnam's Sons; 1901. \$5.

Barber, Edwin AtLee. *Tulip Ware of the Pennsylvania German Potters; an Historical Sketch of the Art of Slip-decoration in the United States.* Crown octavo; pp. 233, with nearly 100 ills. Philadelphia: Patterson & White Co.; 1903. \$1.

Earle, Alice Moore. *China Collecting in America.* Octavo; pp. xi+493, ill. New York: Charles Scribner's Sons; 1906. \$3.



Competition for the Parliament House at Canberra.

The Australian Government announces the resumption of the architectural competition to select the architect for the Parliament House in the new capital city of Canberra. This competition was opened in June, 1914, and suspended in September, 1914, owing to the war. It is now reopened on the original conditions to all friendly countries (enemy subjects not being eligible), the date for receiving drawings being extended to April 30, 1917, at London and Melbourne.

Programmes can be obtained by application to the High Commissioner for Australia, 72 Victoria street, Westminster, London, or to the Works' Departments respectively of the British Dominions, or to the British Embassies at Madrid, Paris, Rome, Petrograd, Stockholm and Washington.

Outline sketch designs only are required. Eight prizes, aggregating £6,000 are offered, the first being £2,000. An international jury of the following architects are asked to make the awards: George T. Poole, of Australia; Sir John J. Burnet, of Great Britain; Victor Laloux, of France; Louis H. Sullivan, of the United States of America, and Eliel Saarinen, of Russia.

W. B. GRIFFIN,

Federal Capital Director of Design and Construction.

A Beautiful Banking Room.

From time to time works of architecture appear which take their place in the history of art as distinct creations standing entirely by themselves and by their own perfection eliminating all comparison. For example, there can be no comparison between the Parthenon and the Taj Mehal, nor can there be any balancing of the beauties of the Strozzi Palace

and the Chartres Cathedral. It is as with the different flowers; one man prefers the lily and to another there is greater charm in the rose. The woodland violet has not the splendor of the orchid; each of them is a lovely creation, but they are as impossible of comparison as are the clear note of the morning thrush and the splendor of the setting sun.

Now, all of this may seem a very grandiose prelude to a few words expressing one's satisfaction with a contemporary work of art; but how else can one convey the depth of one's appreciation? The architects and the painter who together produced the beautiful banking room of the Guaranty Trust Company, at Broadway and Liberty Street, had no need of another master-work to place them among the great designers of these times. But in the interior of the building for the Brooklyn Trust Company, at Clinton and Montague Streets, Brooklyn, they have created a room of such complete and satisfying charm as to make one forget the beauties of the Guaranty Trust. This is the work of men who love their task. The affection of the artist is evident at every hand—in form, in color and in material. The satisfaction of the men who did it and of the men who gave them the opportunity to do it must indeed be great. E. D. L.

Smoke Perplexities of the Architect.

Is this perhaps a new train of thought, that smoke can have any bearing whatsoever on the problems of the architect? Have you ever stopped to consider that in this connection it might be a hindrance? For such it is. It limits not alone the expression of the finer ideals of the artist, but is detrimental from a practical standpoint, making unavailable for use certain materials which could otherwise be utilized to the best advantage and necessitating changes in design that the

building may be made impervious to a smoke-laden atmosphere.

No one will deny that soot and the associated substances are injurious to building materials. To any one walking down one of our city thoroughfares it is a self-evident fact. When, however, we wish to know the how and why of its many injurious effects it is essential that we understand its composition and properties. Soot, in as far as materially concerns us, is the product of the incomplete combustion of the one great smoke-producing fuel, soft coal—all others being negligible.

It is not a difficult task to burn soft coal without the emission of black smoke. The furnace has only to be so constructed that sufficient air will be admitted to combine with the combustible matter in the coal; that the air will be thoroughly mixed with the combustible gases; that a sufficiently high temperature be maintained until the gases are completely burned.

In domestic installations, where the coal is burned at a comparatively low temperature, Sir Roberts Austin finds as an average of some forty experiments that of the coal burned in grates something more than 6 per cent. is given off with the flue gases in the form of soot.

All conditions in the furnace greatly affect the amount of carbon lost as soot, but the fact stands out that where equal amounts of coal are consumed, domestic installations are worse offenders than boiler furnaces. Loss of efficiency through the escape of soot itself is small. This is, however, an indication of a far greater loss in the shape of unburned, invisible gases, which loss may reach as high as 10 per cent.

Soot consists of carbon in a finely divided state. This, as is well known, is lamp black, the basis of most black paints, and has a great covering power. It has the power of absorbing the corrosive acids which are produced by the combustion of coal containing sulphur.

Common coal tar makes the soot cling tenaciously to everything with which it comes in contact. Tar contains carbolic acid and other creosote bodies of an injurious nature. Soot also contains sulphurous acid, sulphuric acid, oil of vitriol, sulphuretted hydrogen, hydrochloric acid.

The acids corrode and tarnish all of the common metals. They attack many of the stones and other building materials, especially limestone. Draperies, paper, paints and other decorative materials suffer to no less extent. In burning the sulphur in the coal the relatively inactive sulphurous acid

is produced, but this soon becomes oxidized in the air to the far more active and corrosive sulphuric acid. These acids are also poisonous and detrimental to health. The soiling of the metallic surface by the presence of soot containing no injurious constituents is a simple matter and is easily remedied by simply wiping off. This phase is, unfortunately, of rare occurrence, as most soot contains both tar and acids.

When the surface is covered by soot containing tar the matter is more serious—far more heroic measures have to be taken in order to clean it, chemicals being frequently necessary. The corrosion caused by the acids and other gaseous impurities in the air brings about a permanent injury to the metal, destroying the beauty and strength. This can only be guarded against by some means of protection.

Sulphuretted hydrogen is the only common gas which attacks silver, tarnishing that substance, forming silver sulphide, which must be removed by some polishing agent, causing a loss of silver. Copper and brass are also readily tarnished by this and require constant polishing to keep them bright. Black copper sulphide is the coating formed. Ammonia also attacks copper and brass readily and this, combined with the acids in the air, forms a green coating called "verdigris." Gold itself is very little affected by the corroding constituents of the atmosphere. When, however, it is alloyed with copper, as is usually the case (pure gold being soft), tarnishing and corrosion take place to some extent.

The corrosion of pure iron in pure air is not extremely rapid, but when iron contains impurities such as sulphide, phosphide, carbide and free carbon, corrosion is accelerated. When saline substances and strong acids are introduced into the rain water, rusting is increased manifold.

Dr. Rideal found 4.25 per cent. sulphuric acid dissolved in the rust from iron roof girders from the Charing Cross Station in London, which collapsed because of this rusting. In other places where there was not an appreciable amount of smoke one-third to one-quarter as much sulphate was found. This was due to improper protection by paint.

The acid which is absorbed by the soot containing tar is by far the most destructive to metallic surfaces. The carbon containing acid is made to adhere firmly to the metal by means of its tar content. In this position the acid has the best possible opportunity to attack the metal—the action being in all probability of an electrolytic

nature. The pitting of iron is in part due to this cause.

Our investigation in the Pittsburgh district brings to light some interesting facts in regard to the length of time that different materials will last. Ingot iron, copper and lead have the greatest endurance. The lives of all metals are of much longer duration, frequently two or three times as long, in an uncontaminated atmosphere than they would be around the steel mills in Pittsburgh. Repainting of metal surfaces is necessary at least twice as often on account of the smoke, and even with this additional protection the metal itself must be renewed about twice as often—adding much to increase in expense. The effect of soot, with the occluded acids, on stone, terra cotta, brick, etc., is somewhat similar to that which it has on metals, i.e., it both soils and corrodes.

The destruction of the beautiful is, however, the more important, as most stones are but little affected by the acids, while all are practically destroyed so far as any decorative value is concerned. Mortar and stone containing carbonate of lime are those which suffer most from the chemical action of the acid and subsequent corrosion by the weather. In many cases this is a very important factor, as limestone and sandstone with a calcareous cementing material make up a large portion if not all of the stone available for building purposes.

Most stones, brick, etc., used for the construction of the main portion of buildings are finished in the rough. The soot settling in the crevices, is very hard, if not impossible to remove, and if removed, a portion of the stone has to be taken off.

The logical step would be to protect the exposed surface of the stone by means of some harmless waterproof coating, which is permanent, does not discolor the stone and gives a surface easily cleaned. Numerous methods, all more or less effective, have been suggested. Hot paraffine can be applied, but is objectionable because the process is slow and costly. Solutions of soap and alum, silicate of soda or barium

carbonate have been used. In the case of carbonate of barium, precaution must be taken, as it is poisonous.

The problem of adapting building materials to use in a smoky atmosphere is most difficult. Limestone, marble and sandstones with a calcareous binder are readily disintegrated by the acid and because of their light color quickly soiled by the soot. They cannot be readily cleaned and when cleaning is possible the stone is worn away in the process and they become dirty in many cities in less than a year. Thus, the stone, which is plentiful and easily worked, can be used only at a great disadvantage. Granite is darker in color and is not corroded, but is too expensive for general use. Dark colored brick do not show the discoloration to any extent, but the mortar is corroded. Glazed brick is the most practical substance available, as it can be cleaned without injury. Contrast in color is impossible to obtain, for in time they all become the same dark, dingy hue.

Soot and its accompanying evils makes of no avail the use of light colors in the painting of the houses of a smoky city unless, perchance, one wishes to paint again within a year. Yet this is due to discoloration rather than to destruction of the paint, for in many cases the soot and tar form a light adhering film, which is actually a protective coating and can be cleaned off, leaving the paint as fresh as ever. Paint is, moreover, not entirely impervious. Moisture and acid often penetrate and injure the surface which the paint is meant to protect.

Interior decorations are even more of a problem than the exterior. Wall paper must be cleaned every six months and renewed at least every two years. Curtains and draperies are soiled as quickly as in smoke free communities. The frequent cleaning, together with the destruction by acid, shortens their life by at least half. The destructive action is probably greatest on fresco paintings, which are not only soiled, but attacked by the acids as well.

RAYMOND C. BENNER.